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THE ECONOMIC HISTORY OF BYZANTIUM
From the Seventh through the Fifteenth Century

Volume 1

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Preface

The idea of producing a book on the economic history of the Byzantine Empire was first floated some years ago, when the late and much regretted Nicholas Svoronos, who would have played a major role, was still alive. A number of unfavorable circumstances did not allow us to proceed further. Eventually, that first idea was revisited, was invested with substance, and became reality; the volumes at hand are the result. The successful completion of this large and difficult project is owed to the enlightened interest, indeed commitment, of certain individuals and institutions whose contribution has been decisive. The institutional sponsors are the Bank of Greece and the Union of Greek Banks, while the Cultural Foundation of the National Bank of Greece (MIET) has been responsible for the practical aspects of the coordination and for the publication of the Greek edition.

Efthymios Christodoulou, who was governor of the Bank of Greece when support for the project was being sought, had always shown great interest in the history of the Byzantine economy, for he realizes the importance of Byzantium in the history of humankind, and therefore the need for a global examination of the economy that formed the underpinnings of the state and culture of Byzantium. His enthusiasm was expressed through his continued encouragement and moral support, and it took material form in the considerable contribution of the Bank of Greece in financing the project.

The late Manolis Kasdaglis, director for many years of the Cultural Foundation of the National Bank of Greece, was one of the first individuals to conceive the idea of such a project and gave his unwavering support to its realization. It is a matter of deep regret that his untimely death did not allow him to see the publication of this book.

The late Michael Vranopoulos, when he was chairman of the Union of Greek Banks, also expressed interest in the project; we owe the participation of the Union in the sponsorship of the project to him and to the Governing Board of the Union. Successive governors and directors of the Bank of Greece and the Union of Greek Banks respectively showed unflagging interest and facilitated our work in a number of ways. I should like to thank Loukas Papademos, currently governor of the Bank of Greece, and Georgios Mirkos, former governor of the National Bank of Greece. Special thanks are owed to Theodoros Karatzas, currently governor of the National Bank of Greece and chairman of the Union of Greek Banks, for his unwavering support and for making decisive contributions which ensured that the project would reach completion. I am particularly grateful to Yiannis Manos, former general secretary of the Union of

Greek Banks, for his manifold help. I am also happy to acknowledge the support of the governing boards of the Union of Greek Banks and MIET.

The Scholarly Committee, consisting of Cécile Morrisson, Charalambos Bouras, Nicolas Oikonomides, and Constantine Pitsakis, collaborated in exemplary fashion on the organization and realization of the project. Along with their contribution to general issues, members of the committee had editorial supervision of specific chapters: N. Oikonomides of the chapters on the agrarian economy, Ch. Bouras of those on the urban economy, C. Morrisson of the chapters on commerce, and C. Pitsakis of the chapters that treat legal issues. I am particularly grateful to C. Morrisson, who gave generous and valuable help, reading and commenting on chapters for which she was not formally responsible. I bear the responsibility for the supervision of the entire work.

I should like to thank a number of economists—Vassilis Droukopoulos, Georgios Krimbas, Georgios Liodakis, and Stavros Thomadakis—who, at an early stage of the project, participated in a workshop and contributed, with their knowledge of the science of economics, to the better conceptualization of the topics with which we were dealing.

Given the large number of participants, the work of coordination was immense and difficult. I should like to thank the staff of MIET, and most particularly Olga Drosinou, for the assistance they provided. Agamemnon Tselikas and Demetrios Kyritses helped with the illustrations, and I am grateful to them. I should also like to thank Charles Dibble for his contribution to the onerous task of checking the translations.

Finally, I should like to thank all of the authors for their contribution to this collective effort. Their scholarship, their enthusiasm for the project, and the patience they showed throughout our lengthy collaboration made a difficult task pleasant and productive.

Angeliki E. Laiou

Introduction

Writing the Economic History of Byzantium

Angeliki E. Laiou

It is common knowledge that the Byzantine Empire lasted for more than a thousand years from beginning to end, undergoing many changes and experiencing periods of expansion and contraction. It is less widely known, understood, and accepted that this longevity was based on an economy with interesting and often complex structures. The Byzantine Empire had at its disposal resources that no medieval state, at least in western Europe, could command until the end of the Middle Ages; the Islamic states, of course, are another matter. During the happy times, for example, in the tenth century, the Byzantine Empire projected an image of wealth and luxury. The travelers who visited its capital were profoundly impressed by the wealth accumulated in Constantinople; riches that were very real but that also served the state's diplomatic purposes as a means of propaganda and a way to impress foreigners as well as its own citizens. Constantine VII describes the details of the preparation of the palace when foreign rulers or ambassadors were expected: silver lamps, gold-shot curtains, rich carpets decorated the rooms to which roses lent their scent, and which were full of officials in their silk, gold-embroidered dress. When Liutprand of Cremona visited Constantinople for the first time, in the 940s, he was stunned by the magnificence of the palace and of the emperor, seated on his gilded throne with its automata: birds that sang, lions that roared, and a machine that raised up the throne before the visitor could arise from the prostration. Constantine VII, for his part, acknowledges that all of this was precisely orchestrated, so much so that the lions' roar stopped just at the moment when the emissary presented his gifts to the emperor.

Such extravagances were possible until the late twelfth century. Manuel I Komnenos organized an impressive reception for the Seljuk sultan Kilidj Arslan II. The throne room was so richly decorated, and the emperor himself so bedecked with gold, pearls, precious stones, and silks, that the sultan was duly persuaded of the greatness of the empire—without, however, being deterred from attacking it a few years later. From the tenth century until the end of the twelfth, the Byzantine state gave the impression that it had great resources and very considerable wealth. The extravagant Constantine IX Monomachos, for instance, if we are to believe the Arab source that reports it, sent the caliph a gift of 500,000 gold coins, a whole 2.2 tons of gold. Manuel I spent on a single, ill-fated expedition to Sicily 2,160,000 gold coins, approximately 8 tons of gold.

These are the riches described admiringly and greedily by the western sources of the Fourth Crusade when they write of the conquest of Constantinople, the wealthiest and most powerful city in Christendom, and of the systematic looting that ensued.

Indeed, an important specificity of the Byzantine economy lies in the role of the state, which is discernible during almost every period, although its weight changed. Apart from the fact that the state retained the monopoly of issuing coinage, whereas in medieval western Europe this right was appropriated by major and minor feudal lords, it also had the power, the possibility, and the will to intervene in other important sectors of the economy. It always exercised formal control over interest rates, thus providing the institutional conditions for loans and for certain forms of investment, which could become advantageous or disadvantageous for particular social or economic groups or for specific activities, for instance, maritime trade. In contrast to the situation in western Europe, the church had very limited control over interest rates, a control dimly visible at certain moments, primarily at the end of the empire, when the patriarchal court of Constantinople judged commercial cases.

State intervention can be seen in other areas as well. In the tenth century, in Constantinople, which constituted the largest single market, the state set the parameters for the activity of the guilds and corporations that sold foodstuffs or dealt in commodities in which the state had a special interest (e.g., the treatment and sale of silk), or whose members exercised a profession that was of importance for trade (e.g., the notaries). During the same period, and in the same city, the state fixed the profit rates for some of these activities. The emperor and his officials intervened at times of crisis to ensure the provisioning of the capital and to keep down the price of cereals. Finally, during long periods of its history, the state collected part of the surplus in the form of tax and put it back into circulation, at least in part, through redistribution in the form of salaries to state officials or to the army, or in the form of investment in public works, buildings, or works of art. Even the transfer of tax revenues by the state to individuals or institutions may be said to have influenced the use of the surplus. It therefore comes as no surprise that studies of the Byzantine economy have focused, initially and principally, on fiscal issues and, by extension, on the agrarian economy which was for centuries the major surplus-producing economic activity. Besides, our sources are more informative on such issues than on many others.

The state, however, was not the only player in the economic field in Byzantine times or at any other time. There were also economic relations that were either partly dependent on the state or completely independent of it, for example, agricultural production, relations between great landlords and peasants, and the relations of both with the market. There was commerce, domestic and international. There was the urban economy, the economic activities of the urban population, and the role of the cities as centers of production, consumption, and exchange.

Although we have many good studies of various aspects of the Byzantine economy, there is no single synthetic work that would provide a global view of the subject. The fact that over the last few decades research has made important strides brings into evidence the need for a work that would treat the economy as a whole. I do not simply

mean that there is need for a study of the development of the Byzantine economy over time. It is equally important to understand its structures and their articulation, something that cannot be easily achieved in studies of specific topics. The questions that arise in connection with the Byzantine economy are many, and the answers that have been given by scholars are often conflicting. For example, how productive were its various sectors? The answers that have been given up to now to this important question, especially with regard to the agrarian economy, cover a broad spectrum and are connected with another question, namely, whether productivity varied according to the prevalence of the small holding or the large estate, which in turn leads to broader questions regarding political and social structures.

When we turn to the commercial sector, the first question that arises is, how important were trade and market relations, in which periods, and for which part of the population? Was the movement of goods, both within the empire and outside it, the result of economic relations or of non-economic exchange such as gifts or political payments? Were markets a determining mechanism, and was there an important merchant class or not? Here, too, there are conflicting opinions. Some scholars think that there was always significant economic exchange, while others consider that there was development, and that it was not unilineal in the sense of ever-increasing commercial activity and ever greater importance of the commercial class; still others think that commercial relations were just about insignificant until Italian merchants entered the eastern Mediterranean and brought about the differentiation of the economy. The latter group emphasizes autarky and autoconsumption within the framework of both the peasant smallholding and the large estate.

There are other important questions regarding structures. How well articulated was the Byzantine economy, what were the mechanisms through which articulation was achieved, and what were the determining factors, the state, market forces, or a combination of the two? Similar questions have been posed with regard to money: did its production and circulation serve the needs of the state, or those of the economy at large? What, in the end, was the role of the state and exactly how was it played out, through which institutions, in which sectors, with what results? Was the Byzantine economy truly tied to the state, which functioned according to its own logic that had more to do with political aims and less or nothing to do with the needs of the economy? Or, on the other hand, was this an economy in which the state had great economic power, both for institutional reasons and because of the size of the state sector, but in which there were also economic relations formed without direct state intervention and following economic laws to which the state also was subject, and according to which it shaped its policy in order to respond to the needs posed by the development of the economy? In other words, was this a primarily state economy that collapsed with the decline of state power or, to the contrary, a mixed economy that showed flexibility, at least up to a point, and that, despite its limitations, changed its structures as a result of changing circumstances both domestic and international?

Also at issue is the economic behavior of the people. Were the Byzantines apathetic and passive in their economic relations, covered by the umbrella of a state whose pro-

tection of the consumer left no room for economic experimentation and investment, or does their behavior suggest that they were, indeed, capable of taking advantage of opportunities and following the profit motive? What were the ideological norms on economic matters, or, to put it differently, what do we know of the economic thought of the Byzantines, and to what extent was it systematized?

Current research has made great progress on some of these issues, despite the difficulties posed by our uneven documentation. The greatest difficulty lies in the relative dearth of quantitative material, although this is to some extent being remedied by the use of new sources including the data provided by archaeology and numismatics. As I write these lines, a number of scholars, among them the contributors to this volume, are reaching the conclusion that the Byzantine economy was more complex and more differentiated than we thought in the past. Scholars no longer accept the idea that this was an economy with archaic structures and without significant development.

It should be noted that a number of the questions I have mentioned here have not been posed or have not been adequately studied before the publication of this book. When we conceived of this project, we thought there was need of both primary research and a synthetic work that would examine the Byzantine economy as a whole. Our aim is the study of the Byzantine economy in its totality, primarily in the period from the seventh to the mid-fifteenth century. The themes treated here include, among others, the demographic factors, the structures and organization of production in the agrarian and urban economies, consumption, investment, credit mechanisms, prices, modes of exchange, domestic and international trade, the production and circulation of coinage, fiscal phenomena, property, aspects of the applied law governing economic issues, economic ideology, and the place of the Byzantine economy in the medieval Mediterranean world.

This book differs in a number of ways from other histories of the medieval economy. First of all, although it is conceived as a synthetic work, which means that certain chapters are the synthesis of earlier work, many other chapters treat new topics or are based on new, original research. The second distinguishing trait is connected with the source material. Alongside the written sources, the results of archaeological research are of great significance, especially with regard to the urban economy. The reasons for this specificity lie in the fact that most archaeological research has been carried out on urban sites and also, at least until the thirteenth century, the written sources relevant to the urban economy are poorer than for, say, the agrarian economy or the fiscal system. We therefore thought it necessary to seek the help of archaeologists, asking them to provide portraits of the economic life of various cities on the basis of archaeological data. Thus, along with the synthetic chapters that treat the urban economy, certain cities have been examined singly. Third, in Byzantium the economy functioned within a framework of legal rules and preconditions, as well as of legal practice, even if theory and practice were not always in agreement; for this reason, the contribution of jurists and students of the history of law was important.

It is customary in the introduction to a synthetic work to take account of the most important earlier works of the kind. In our case, this would be difficult to do. There

are, indeed, many and worthwhile studies on particular issues, and these are included in the bibliographies to the various chapters. However, large general studies of the Byzantine economy do not exist. I will, therefore, mention only one or two books that do aim at a general view. The first is Michael F. Hendy's *Studies in the Byzantine Monetary Economy c. 300–1450* (Cambridge, 1985), which, despite its somewhat restrictive title, has a great deal to say about the Byzantine economy in general. The second consists of the two volumes of *Hommes et richesses*,¹ in which the specialized studies tacitly and implicitly paint a synthetic view of some important aspects of the economy.

Given that the conceptualization as well as the execution of the work at hand took place in Greece, it seems appropriate to mention some of the Greek scholars who have studied the economy of Byzantium. Such an acknowledgment is pertinent for two other reasons as well: their work is not widely known to the international scholarly community, and these scholars were economists by training or by profession, something rare among Byzantinists.

Given the weighty role of the state in the Byzantine economy, it is not surprising that these scholars should have focused their interest on the relationship between the state and the economy. Already in the nineteenth century the topic had attracted the attention of men whose primary activity was either the study or the practice of economics. First in chronological order is Paulos Kalligas, governor of the National Bank of Greece, who wrote, along with studies of the history of Byzantium, an essay on “serfdom” and taxation.² Alexandros Diomedes was governor of the National Bank of Greece, the first governor of the Bank of Greece (1928–31), a member of the Academy of Athens, and a student of the economy of Byzantium. As might be expected of the first governor of the central bank, he was interested in coinage and money; he also had broader interests, writing about the land tax, the economic and social policies of the Macedonian emperors, and the economic policy of the Byzantine Empire after 1204.³

Any mention, however schematic, of the economists who studied the Byzantine economy cannot but give pride of place to Andreas Andreades, the first professor of public finance at the University of Athens. His monumental work on the history of Greek public finance, published between 1928 and 1931, and reissued in 1992, includes the Byzantine period. The first edition was published with support from the Bank of Greece, the National Bank of Greece, and the University of Athens, among others. The English edition was published by Harvard University Press.⁴ Andreades wrote on topics that retain their interest today. As an example, I mention his *La vénalité des offices*

¹ *Hommes et richesses dans l'Empire byzantin*, 2 vols. (Paris, 1989–91).

² P. Kalligas, “Περὶ δουλοπαροικίας παρὰ τοῖς Βυζαντίοις καὶ περὶ φορολογικῶν διατάξεων,” in idem, *Μελέται καὶ λόγοι* (Athens, 1882).

³ A. N. Diomedes, “Ἡ ἐξέλιξις τῆς φορολογίας τῆς γῆς εἰς τὸ Βυζάντιον,” *ΕΕΒΣ* 19 (1949): 306–14; idem, “Ἡ πολιτικὴ τῆς Μακεδονικῆς δυναστείας κατὰ τῆς μεγάλης ἰδιοκτησίας (Athens, 1943); idem, “Ἀπὸ τὴν οἰκονομικὴν πολιτικὴν τοῦ φθίνοντος Βυζαντίου: Ἡ ἐξέλιξις μετὰ τὸ 1204.” *Νέα Ἑστία* 55 (1953): 823–32.

⁴ A. Andreades, *Ἱστορία τῆς Ἑλληνικῆς Δημοσίας Οἰκονομίας*, vol. 1 (Athens, 1928); vol. 2 (Athens, 1930–31); reissued in 1992, with an introduction to the second volume by Savvas Spentzas. For the English translation, see A. Andreades, *A History of Greek Public Finance* (Cambridge, Mass., 1933).

est-elle d'origine byzantine?, a question to which he gave a negative reply, explaining that in Byzantium the sale of offices was a form of loan to the state.⁵ He studied the Byzantine budget, money, and the purchasing power of precious metals, and participated in the long discussion of the advantages and disadvantages of the free economy. In contrast to earlier scholars, he presented both the positive and negative aspects of state intervention in the economy.⁶ Andreades had the great advantage over other scholars that he brought to the study of the Byzantine economy the knowledge and systematic thought of the good economist.

In the work at hand, we made the decision to begin the in-depth study of the Byzantine economy with the seventh century; a few words of explanation are necessary. It will become apparent to the reader that the great political and demographic upheavals that began in the second half of the sixth century and reached crisis proportions in the seventh created conditions that were very different from those obtaining in the large and wealthy Justinianic state. The economic and fiscal structures changed very significantly, and the new structures that emerged were those of a medieval economy. Of course, they were not created *ex nihilo*. They developed from previous forms, but changed to such a degree as to become qualitatively different. The bases for the subsequent growth of the Byzantine economy were created in the seventh and eighth centuries; this substantive reason explains our choice of a starting point.⁷

There is also a second reason, historiographical this time. For the early Byzantine period, through the sixth century, we have the great synthetic work of A. H. M. Jones.⁸ If we had undertaken an equally in-depth study of this period, we would have needed at least another volume, and this seemed unnecessary. On the other hand, archaeological research has uncovered data that Jones did not have at his disposal, which, along with the development of new viewpoints and approaches to the various problems, have changed our conception of the sixth century. The new interpretations are discussed here in "The Sixth-Century Economy," by Cécile Morrisson and Jean-Pierre Sodini, which sets the stage for the rest of our study.

A brief note on terminology: the terms *proto-Byzantine* or *early Byzantine* that are sometimes used in this book refer to the period from the fourth through the sixth century.

⁵ Paris, 1921.

⁶ A. Andreadès, "Le montant du budget de l'Empire byzantin," *REG* 34 (1921): 20–56; idem, "De la monnaie et de la puissance d'achat des métaux précieux dans l'Empire byzantin," *Byzantion* 1 (1924): 74–115; idem, "Byzance, paradis du monopole et du privilège," *Byzantion* 9 (1934): 171–81.

⁷ It is noteworthy that a recent study of the economy of western medieval Europe also differentiates the 5th–7th century from the 7th–9th century, that is, it considers the 7th century as a break of sorts: P. Contamine et al., *L'économie médiévale* (Paris, 1993).

⁸ A. H. M. Jones, *The Late Roman Empire, 284–602: A Social, Economic and Administrative Survey*, 2 vols. (Oxford, 1964).

Political History: An Outline

Angeliki E. Laiou

The political history of the Byzantine Empire has been well studied by large numbers of scholars. This brief summary is intended simply to sketch the broad outlines of political events and their consequences.¹ It is self-evident that economic developments were greatly influenced by changes in the political life of the empire, and the reverse is also true, although somewhat less intuitively so.

The Byzantine state has its origins in the late Roman Empire, whose continuation it was, in the eyes of contemporaries and until at least the late twelfth century. Its inhabitants called it “the Empire of the Romans,” and, especially in the early period, the emperors made concerted efforts to establish continuities with the Roman Empire. The third century was one of multiple crises, which, although they affected both the eastern and western parts of the empire, were much more acute in the West. The problem of the invasions of Germanic tribes was constant. The imperial office suffered a crisis of authority, as the problem of succession was never really solved. In the third century, a series of emperors were elected by the armies in the field and ruled for brief periods of time. The fiscal system was in disarray, resulting in low revenues for the state, the coinage suffered successive devaluation, and there was a raging inflation. Finally, there was a moral and religious crisis of considerable proportions.

Two emperors, Diocletian (284–305) and Constantine I the Great (324–337), undertook sweeping reforms on virtually all fronts. Diocletian approached the problem of succession through a division of the empire first into two parts, with Diocletian, significantly, retaining control of the eastern part. Eventually, with the appointment of two caesars, one in the East and one in the West, the division was into four parts. This system proved unstable, and Constantine I reunited the entire empire under his rule. However, on his deathbed he divided it again between members of his family. The division of the empire into East and West, corresponding to the different levels of development and the different needs of the two areas, was permanent.

¹ This chapter is not documented, for obvious reasons, except for a few references to particular scholarly works. For a more extensive review of Byzantine political history, consult G. Ostrogorsky, *History of the Byzantine State* (New Brunswick, N.J., 1969), which is still the best survey in English. For the early period (4th–mid-7th century), a useful survey is that of A. H. M. Jones, *The Decline of the Ancient World* (London, 1977); an inspired comparative study of late antique eastern and western Europe is provided by P. Brown, *The World of Late Antiquity, A.D. 150–750* (London, 1971).

A number of reforms had to do with the administration of the state. The central bureaucracy was reorganized, while the provinces were increased in number and decreased in size, to provide for greater efficiency. Civil and military control were in separate hands, those of the governors and the *duces*, a separation that, despite occasional exceptions, remained in force until the institution of the exarchates and themes. The army underwent a series of changes, both by the strengthening of the defenses of the frontier and by the creation of strong mobile units, the *exercitus comitatensis*. The coinage was reformed, by both Diocletian and Constantine, who stabilized the gold coin, the *solidus*, and struck it at 72 to the pound of gold. It was a lasting reform. The system of taxation was profoundly altered, in a way that made it more flexible as far as the state was concerned, since the assessments (*indictiones*) were adjusted each year to reflect the expected needs of the state. The tax was collected in kind (although in the eastern half of the empire it sometimes took the form of cash) and was assessed upon a combined land and human fiscal unit, the *jugum* and *caput* together. One of the results of this reform was the acceleration of the process whereby peasants became virtually tied to the land they cultivated, since they had to stay in the villages, or on the large farms, in which the census registered them. In a period of shortage of labor, this became an instrument in the hands of the landlords, who used it to try to alleviate their labor problem.

In order to deal with inflation, Diocletian passed an unsuccessful measure, the famous *Edict on Prices* (302), by which he tried to fix the maximum price of various commodities, threatening with death those who did not follow the law. The *Edict on Prices* did not stem the inflation it was meant to stop. The reorganization of finances and the coinage was much more successful in that respect.

As far as the history of the eastern part of the empire is concerned, the two fundamental reforms were the recognition of Christianity as a religion not only legitimate but also adopted and supported by the emperor and the shift of the capital from Rome to Constantinople. Both were the work of Constantine I. The recognition of Christianity, in 313 (Edict of Milan), began the process that would make it the official state religion (in 381) and the church the richest and most powerful institution after the imperial office. It also meant a close relationship and interdependence between the church and the state, exemplified by Constantine's very active participation in the First Ecumenical Council, the Council of Nicaea, in 325. Partly because of this interdependence and partly because a long philosophical tradition demanded the elaboration of the tenets of the Christian faith, especially with regard to the natures and attributes of Christ, the legitimization of Christianity was followed by centuries of religious controversy, which pitted the eastern provinces, mostly Syria and Egypt, often supported by the pope of Rome, against Constantinople. Arianism became a particularly important heresy, since it was adopted by the Germanic tribes who inundated the western part of the empire in the course of the late fourth and fifth centuries. The end of the heretical movements and Christological controversies did not come until the loss of the eastern provinces.

As for the move of the capital to Constantinople, that came at the end of a process

by which various emperors made their headquarters outside the poor and fractious city of Rome. Diocletian himself had favored the eastern part of the empire, spending much time in Nikomedeia. Constantine, however, took the process to a qualitatively different point. He founded Constantinople as a conscious replacement of Rome, as the New Rome (a title first used in 381), that is, he envisaged a permanent shift of the capital to the East. Constantinople was built at a site of great geographic, strategic, political, and economic importance, for it governs communications between the Aegean and the Black Sea and its hinterlands, as well as between Asia and Europe. Constantine and his successors gave it all the trappings of old Rome, including a senate, a hippodrome, and many statues and monuments, among them the altar of Victory, brought to Constantinople from Rome by Constantine's son Arcadius. They also instituted free grain distributions as in Rome. Necessarily, the new capital also became the see of a patriarchate, whose bishop was said, in 381, to have the primacy of honor after the bishop of Rome. The fact of the foundation of Constantinople sealed the political, economic, and cultural fate of the eastern part of the empire for centuries to come. Its "birthday," the day of its inauguration (11 May 330), was rightly celebrated by the Byzantines for centuries afterward. The move of the capital also created two political and ideological problems that had a long life and development: the dispute between the sees of Rome and Constantinople regarding their respective positions and authorities, and the recurring disputes, between the emperors of Constantinople and those of the revived western empire, starting with Charlemagne, as to who legitimately held the title Roman emperor and the concomitant privileges and authorities.

The reforms of Diocletian and Constantine resulted in what has been termed the fourth-century revival, a period of relative stability and wealth throughout the empire. The eastern part was the richest and most populous and had the most diversified economy. The West also prospered in the fourth century, but with a development that favored the growing differences between the wealthy and the poor, the concentration of property into the hands of a few individuals, and the impoverishment of the peasantry. In the 360s and late 370s, the eastern part became involved in wars on two fronts: with the Sassanids in the East and with Germanic tribes (the Visigoths, Ostrogoths, and Vandals) along the Danube frontier and increasingly in the lands south of that region. The emperors of the late fourth and fifth centuries had to deal with these peoples, good soldiers and converts to Arianism. Theodosios I (379–395) approached the problem through a combination of arrangements: treaties, the settlement of some on imperial territory, the incorporation of many into the army. This solution proved unstable, as Gothic leaders were too ambitious, and a reaction on the part of the Byzantine court set in. Eventually the Germanic peoples moved to the West, where they sacked Rome (410), deposed the last Roman emperor (476), and established their own kingdoms, albeit under theoretical Byzantine suzerainty, in Italy (the Ostrogoths), North Africa (the Vandals), and Gaul and Spain (the Visigoths, eventually followed by the Franks in Gaul). Although these invasions did not result in fundamental territorial changes in the eastern part of the empire, there were ravages associated with the invasions of both the Germans and the Huns, especially in the 440s.

In the course of the late fourth and the first half of the fifth century, two ecumenical councils, the Council of Constantinople (381) and that of Chalcedon (451), further elaborated the tenets of the orthodox faith against the Arians, the Monophysites, and the Nestorians, without, however, putting an end to the religious controversies.

The rise of Anastasios (491–518) to the imperial office ushered in a period, lasting through the reign of Justinian I (527–565), during which the eastern part of the empire was, and looked, prosperous, even brilliant, with great achievements in letters, jurisprudence, and the arts. Anastasios had been a fiscal official and seems to have run imperial finances with a firm and competent managerial hand, so that, upon his death, he left in the treasury a large surplus (320,000 pounds of gold), despite the fact that he had abolished an urban tax, the *chrysargyron*, which had been levied on commercial and industrial enterprise. Anastasios was a moderate man in religious matters, but his reign was punctuated by popular unrest.

The reign of Justinian I is unquestionably the high point of the late antique period, as a number of indicators suggest. The state was rich, through the efficient, even ruthless collection of taxes and through its own monopolies. Justinian had inherited the surplus collected by Anastasios I as well. The society also was rich, with considerable industrial production and commercial activity. With these considerable resources, Justinian carried out a policy of reconquest of the western provinces and, by the end of his reign, very considerably enlarged the areas under direct Byzantine control. In the 530s, Belisarius reestablished Byzantine sovereignty over the kingdom of the Vandals in North Africa and the Ostrogothic kingdom in Italy. The 540s were more difficult years, for the Persians, under Chosroes I Anushirvan, invaded the eastern territories, including Syria, Armenia, and Lazica. The resurgence of Ostrogothic power in Italy led to lengthy and devastating warfare, which lasted until the Byzantines emerged victorious once again in 554. The northeastern part of Spain was recovered from the Visigoths. The eastern Roman Empire now extended over all of Italy, most of North Africa, and part of the Iberian peninsula. But in the East the Persians retained their power, which, for the moment, was held in check by a series of fortifications and peace treaties. In the Balkans, Slavic, Bulgar, and Avar raids were harbingers of the future; here, too, a considerable line of fortifications was erected, though it eventually proved ineffective.

Within the empire itself, the reign of Justinian left a lasting legacy. One of the most important is the great codification of Roman law and jurisprudence in the *Corpus Juris Civilis*, the second codification after that of Theodosios II, and by far the most extensive and complete. Justinian himself issued a large number of novels in Greek. The use of the Greek language symbolizes the great changes that were taking place in the eastern Roman Empire, firmly founded in a Greek intellectual and cultural milieu. There was considerable building activity and artistic production of very high caliber, both monumental (e.g., in Hagia Sophia and the churches of Ravenna) and in the form of icons, ivories, and the products of the minor arts.

There were also grave problems, however. The brilliant reign of Justinian and Theodora was also an increasingly autocratic one, to which the old aristocracy was opposed. The wars had proved very costly, and Italy was devastated. On top of this, there was a

severe outbreak of the plague in 541–542, which, attended by other diseases, and recurring throughout the sixth century and even later, had powerful and negative demographic results.²

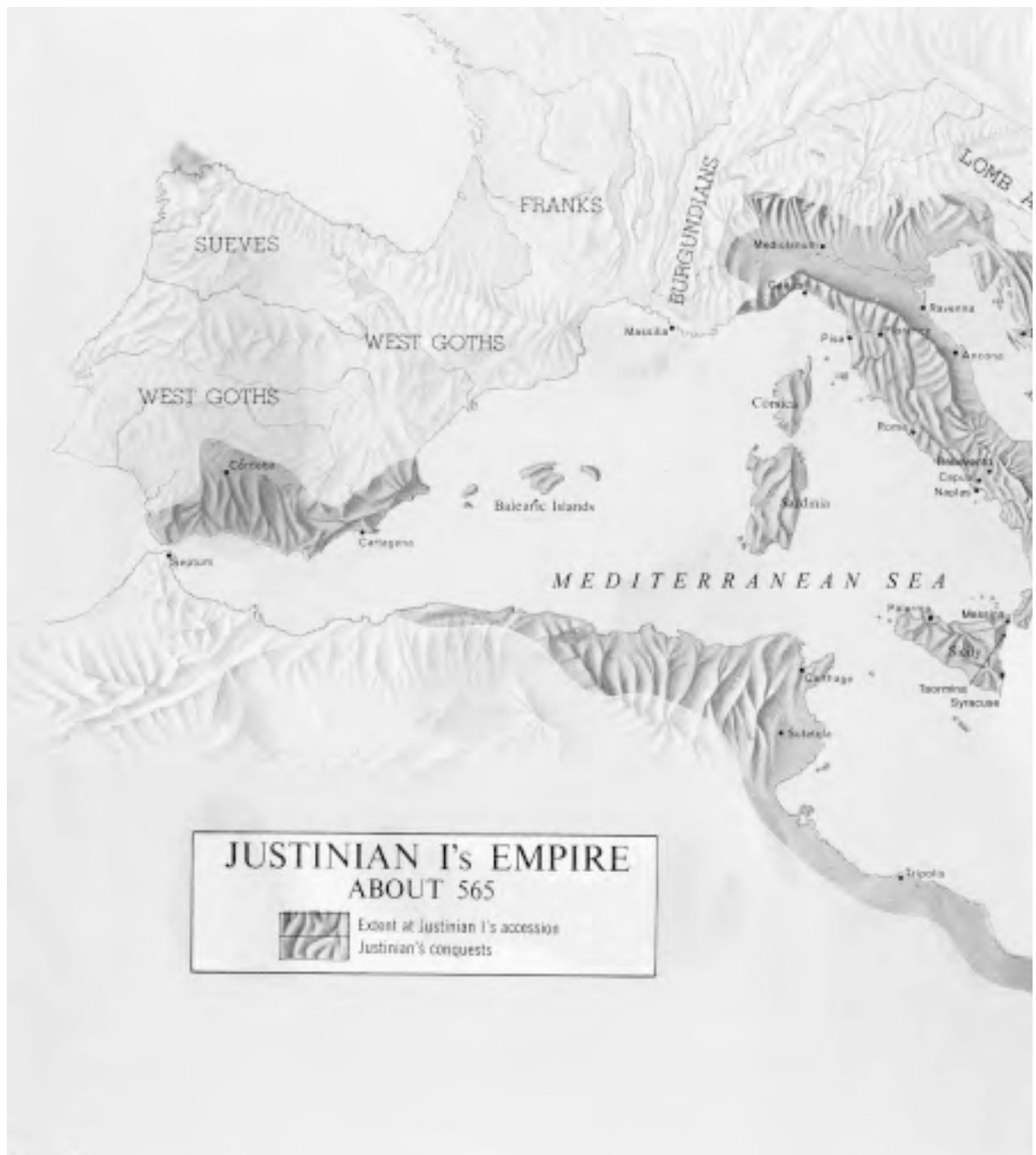
The late sixth century and the beginning of the seventh were catastrophic, as the brilliant edifice crumbled and the Justinianic world order began to come to an end. Both the Balkan and the eastern frontiers collapsed, while the Visigoths started to recover their possessions in Spain, and the Lombards in Italy and the Berbers in North Africa attacked the newly recovered provinces. Internally, civil unrest erupted in the major cities of the empire, taking the form of wars between the circus factions and their followers. The very capable emperor Maurice reorganized the Byzantine possessions of North Africa and Italy into the two exarchates of Carthage and Ravenna. This reorganization gave both civil and military command to the exarch, a military man. Intervening in a Persian dynastic conflict, Maurice was able to reach a very favorable arrangement with Persia in 591. Eleven years later, his army, fighting against the Avars and angry at being forced to winter beyond the Danube, rebelled and overthrew him.

The next few years brought the empire to a very low point, menacing its very existence. Under Phokas, civil unrest continued unabated, while the Persians attacked once more, easily conquering Armenia, Syria, Egypt, and much of Asia Minor. The Slavs and Avars had already been attacking the Balkans south of the Danube, destroying their urban fabric, and the Slavs were starting to settle in the Balkans. They attacked Thessalonike in 586, 604, 615, and 682 and the Peloponnese after 582. The raids were followed by settlements. By 626 the Persians and the Avars and Slavs laid a terrible siege to Constantinople by land and by sea; the city was saved by Patriarch Sergius and a Byzantine victory against the enemy forces at sea.

By then the government was in the hands of Emperor Herakleios (610–641), who was a first-rate general. He managed to muster and reorganize the remaining military forces, and in a series of brilliant campaigns brought the war to Persia and recovered the territory that had been lost to the Sassanids. By 634, however, the Arabs began their astonishingly rapid advance into the eastern territories of the Byzantine Empire as well as into Persia. The battle of Yarmuk (636) sealed the fate of Syria. Syria, Palestine, Armenia, and Egypt fell by 642, and conquests in Asia Minor followed. By the late seventh century, North Africa had been conquered, and by 711 the conquest of Gibraltar brought the Arabs into Spain. Meanwhile they had acquired sea power and set their sights on Constantinople. The city was besieged unsuccessfully in 678; the failure of the Arabs to take the capital then and later, in 718, stopped their advance into European soil from the east, as the victory of Charles Martel, a few years later, was to do in the West.

These developments were of fundamental importance for the Byzantine Empire. Its control of the Mediterranean, established by Justinian I, was gone forever. Its territories were reduced very considerably indeed. The loss of the eastern provinces was of

² For this, and the reign of Justinian in general, see C. Morrisson and J.-P. Sodini, "The Sixth-Century Economy," *EHB*.



1. The empire of Justinian I, ca. 565 (after G. Ostrogorsky, *History of the Byzantine State* [New Brunswick, N.J., 1957], frontispiece)



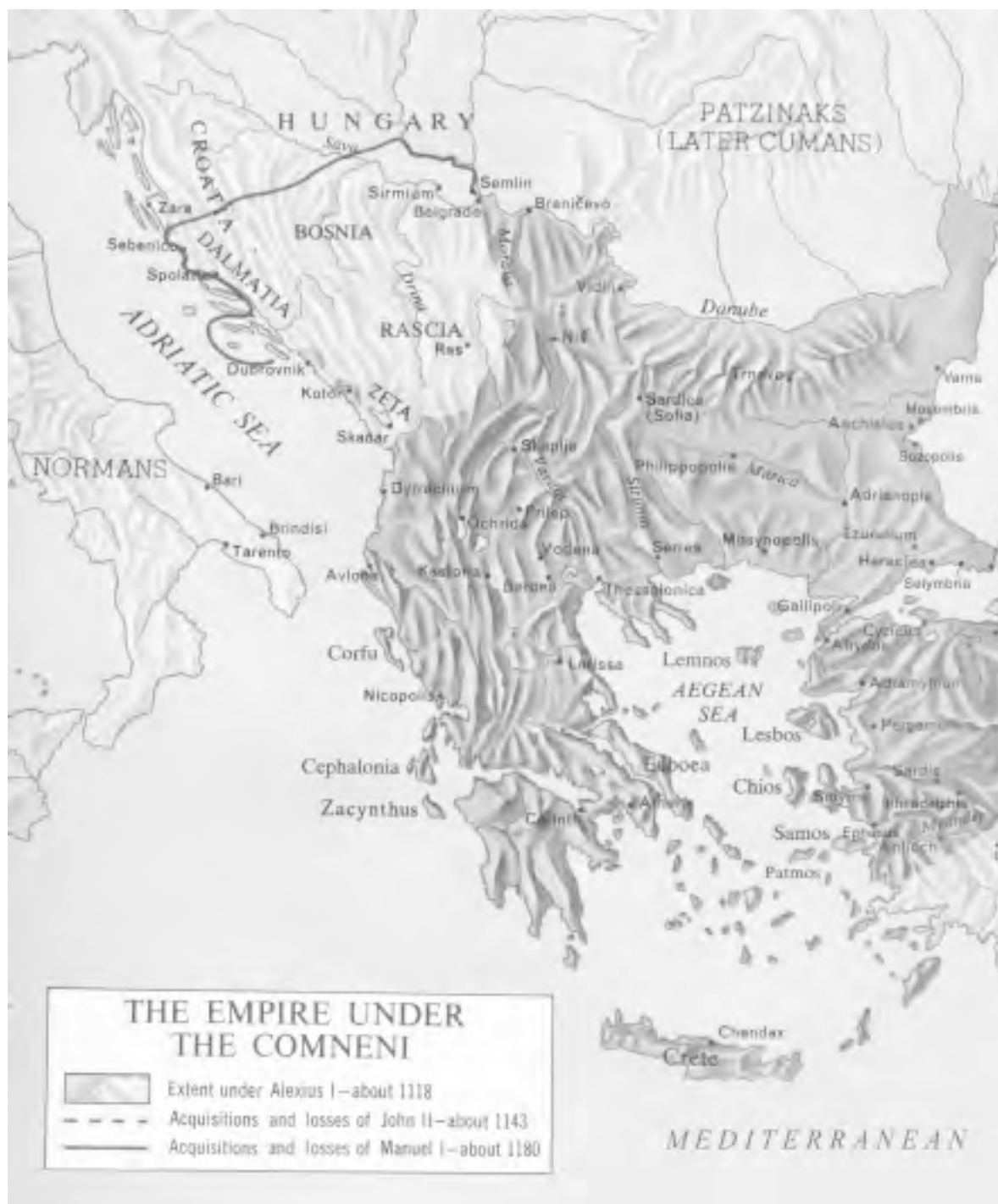


2. The Byzantine Empire, ca. 780 (after W. T. Treadgold, *A History of the Byzantine State and Society* [Stanford, Calif., 1997], 368)



3. The empire of Basil II (after Ostrogorsky, *Byzantine State*)





4. The empire of the Komnenoi (after Ostrogorsky, *Byzantine State*)





5. The Byzantine Empire in 1282 (after A. E. Laiou, *Constantinople and the Latins: The Foreign Policy of Andronicus II, 1282–1328* [Cambridge, Mass., 1972], 286–87)



primary significance, for those were the richest and most urbanized parts of the state. The Balkans had suffered greatly from the invasions of the Slavs, and it took some time for effective Byzantine control to be reestablished in Thrace and Macedonia. In 681 a momentous development took place, with the recognition, by the Byzantine emperor, of the establishment of an independent state, the kingdom of the Bulgarians, on what had, in the past, been Byzantine soil. Military and political relations between Byzantium and Bulgaria remained very important throughout the subsequent history of these states.

All of this entailed fundamental reorientations. In geographic terms, a brief interlude of flirtation with the western half of the empire in the 660s cannot conceal the true orientation of the empire. Its center and kernel now became Asia Minor, a shift that was to persist until the eleventh century. Asia Minor was very much coveted by the Arabs, who launched periodic invasions and incursions by land, while piratical attacks took place by sea, disrupting communications. Here was the scene of the struggle for the survival of the Byzantine state, and from here would eventually begin the Byzantine counterattack.

With the loss of the eastern provinces, and the destructive raids and demographic shifts in the Balkans, the late antique structures collapsed, and a new state and society emerged that may properly be termed medieval. It was a society where the countryside was of primary importance, the cities being few in number and small in size. The state became more centralized, and the relative importance of Constantinople increased. The old aristocracy declined; society became relatively flat, its basis being the free landholding and taxpaying peasant. The role of religion also increased. The changes were so significant that the seventh century is frequently considered a true watershed, and it is so considered in this book. In particular, the economic structures in the seventh century and after were different indeed from those of the late antique period.

By the end of the seventh century, the Byzantine state was small, under constant threat, and with its productive resources greatly reduced. That it managed to survive is due in large part to what may be termed a girding of the loins, a mustering of the forces of the state around the emperor and the church, associated with a series of reforming actions undertaken by Herakleios and his successors and continued by the Isaurian emperors. In some ways, the reforming period may be said to have lasted from the 620s through the 780s.

Given the military situation, which had been acutely dangerous since the late sixth century, major aspects of the restructuring were connected with the army. Asia Minor first, the rest of the empire eventually, was organized into military, territorial, and administrative units called themes. Originally, the term *theme* meant military roll, and the first themes took the name of the army corps that was stationed there. In a reversal of the administrative system of Diocletian and Constantine, and in a development similar to that of the exarchates, civil and military command were united in the hands of the *strategos*, the military leader of the army. The chronology of the establishment of the theme system is one of the most disputed topics of Byzantine political history. It seems, however, very likely that the first themes were instituted by Herakleios, although the

full development of the system took time to mature.³ The first themes, introduced in the seventh century, were the Armeniakon, the Anatolikon, the Opsikion, and that of Thrace (Thrakoon). The theme of Hellas was created in 695. The recruitment and financing of the army also changed, since the resources of the state had declined precipitously, and ready cash was hard to find. In brief, the vast bulk of the military forces now consisted of free peasant smallholders who held land that enjoyed (limited) fiscal privileges, in exchange for which they (or one person per household) had to give military service. The peasant-soldiers, as they are commonly called, also drew a salary, every four years. They owned their horse and military equipment. Although the “military holdings” do not appear in the sources under this name for a long time, it has been established that the institution existed at least by 741 and was probably in place earlier.

The military effectiveness of both the theme system and the institution of the peasant-soldier has been disputed. It remains a fact that both systems remained in full force through the tenth and the early eleventh century (the theme system for longer than that), and that it was with this military organization that Byzantium carried out its struggle for survival as well as the great tenth-century expansion.

The Isaurian emperors, especially Leo III (717–741) and Constantine V (741–775), also undertook major reforms. Among them one must mention the promulgation of a new law code, the *Ecloga* (741), to replace the unwieldy Justinianic code, which could no longer be used because the judges lacked the necessary jurisprudence, and perhaps because the emperors felt the need to take account of social change.⁴ The *Ecloga* is a suitably brief text, since it was meant to be eminently practical. It is imbued with the medieval Byzantine idea of justice, which means good and impartial administration and just fiscality, coupled with special protection for the weaker members of society. Much of this ideology is couched in religious terms in the *Ecloga*. This code is clearly Roman law, but it flattens social distinctions, and it innovates both in marriage law (in part following canonical traditions) and in penal matters, where capital punishment is often replaced by mutilation. The usefulness of the *Ecloga* is indicated by the very large number of manuscripts in which it has survived, and by the fact that it was translated into Slavic languages, Armenian, and Arabic, and that some of its provisions, especially the penal ones, remained in force in subsequent legislation.

To the Isaurian period belong two other very important practical codes: the *Farmer's Law* and the *Rhodian Sea Law*. The first deals with relations between the inhabitants of a village and, to some extent, between them and the fisc; it deals primarily with peasants who are free and either own or rent land. The free landowning and taxpaying peasantry is the group that forms the basis of rural society from this point (and possibly much earlier, perhaps from the middle of the 7th century) until some time in the eleventh century. The *Rhodian Sea Law*, which rules on matters of navigation and trade,

³ N. Oikonomides, “Les premières mentions des thèmes dans la chronique de Théophane,” *ZRVI* 16 (1975): 1–9.

⁴ On the *Ecloga*, and all subsequent legal texts, see the very useful book by S. N. Troianos, *Οι πηγές του βυζαντινού δικαίου*, 2d ed. (Athens–Komotini, 1999), *passim*.

constitutes the first medieval commercial law code of the Mediterranean basin. With some changes, it remained in force throughout the Byzantine period.

In a period of profound religiosity, which is evident even in the legislation, the Isaurians also tried to carry out major reforms regarding the veneration and worship of icons. Leo III and Constantine V forbade the display and veneration of icons, accepting the cross as the Christian visual symbol. Quite apart from its theological and philosophical aspects, Iconoclasm has been interpreted variously as a movement aiming to reduce the property of the church and stop the drain of manpower to the monasteries and as a conflict between the eastern and western provinces of the empire. In any case, it was an imperial enterprise, whose effect was the strengthening of the imperial office and eventually of the organized church. Internally, the population was split, and there were problems with a large part of the clergy. The veneration of icons was first restored in the second Council of Nicaea (787) and, after another iconoclastic interlude, in 843 by Empress Theodora.

The first two Isaurians were spectacular generals, fighting on both the eastern and western fronts against the Arabs and the Bulgarians. The Byzantine armies penetrated deep into Muslim territory, reaching as far east as Germanikeia, Melitene, and Theodosiopolis (Erzerum), places from which the Byzantines subsequently retreated, not to conquer them until the tenth century. In the north, Constantine V waged unremitting and highly successful wars against the Bulgarians. The situation was reversed on both fronts under their successors, so that by 813 the Bulgarian leader Krum, after having ravaged Thrace, appeared before the walls of Constantinople. By contrast, Byzantine control over the Slavs in the Peloponnese was firmly established in this period.

An event of significant historical and symbolic importance was the coronation of Charlemagne as Roman emperor on Christmas day of the year 800. It meant an end to the Byzantine monopoly of the Roman imperial title, and was the first of a series of events that would lead to troubles with the western emperors.

By the very late eighth or early ninth century, although foreign affairs remained fraught with danger, the Byzantine Empire was entering the early stages of a virtuous cycle, which would lead to the expansion and prosperity of the late ninth and tenth centuries. The beginnings of political recovery may be seen in the successful wars of Constantine V, the successful campaigns against the Slavs in central Greece and the Peloponnese under Irene and Nikephoros I, the reorganization of the themes of Macedonia and Hellas, and the creation of the themes of Kephallenia and the Peloponnese under Nikephoros, all marking the reestablishment of Byzantine administrative control. The aftereffects of the plague had worked themselves out, and there is evidence of a reversal of the demographic curve. Interestingly, the early phases of recovery are somewhat more solid in economic than in political terms, since the political affairs were to suffer a number of reverses.⁵

⁵ On the economic developments, see J. Lefort, "The Rural Economy, Seventh–Twelfth Centuries"; A. E. Laiou, "The Human Resources" and "Exchange and Trade, Seventh–Twelfth Centuries"; C. Morrisson, "Byzantine Money: Its Production and Circulation"; and N. Oikonomides, "The Role of the Byzantine State in the Economy," all in *EHB*.

By the 860s the recovery was entering a much more rapid phase, becoming irreversible in the medium term. From now until the first half of the eleventh century, there was great territorial expansion, which enlarged the Byzantine frontiers to their medieval maximum. The new territories, especially in Asia Minor and northern Syria, were rich, while the eventual pacification of the Balkans increased the human and natural resources of the empire.

In the realm of foreign affairs, certain key dates and events deserve mention. The wars against the Arabs were carried out vigorously during the reign of Michael III. Basil I (867–886) attacked and destroyed the power of the Paulicians, a religious sect in eastern Asia Minor that constituted an important military threat for Byzantium; its capital, Tephrike, fell in 879. The attack of the Muslim pirate Leo of Tripoli on Thessalonike and the terrible sack that ensued (904) serve as a reminder of the importance of controlling the sea-lanes.

Byzantine control of sea communications was being reestablished in the tenth century and became firm with the reconquest of the island of Crete by Nikephoros Phokas in 961. On the eastern frontier, the conquest of Melitene (934) and Tarsos (965) destroyed two important Arab bases in Mesopotamia and Cilicia. In 943–944, the general John Kourkouas took Martyropolis, Amida, Daras, and Edessa. In the 960s and 970s, the great soldier emperors Nikephoros II Phokas (963–969) and John I Tzimiskes (969–976) pursued the war in Syria and Mesopotamia. Phokas took Mopsuestia and Cyprus in 965. Antioch, a city important in itself and because it commanded communications, fell in 969; Aleppo, another important Arab base, was conquered in the same year, and Nisibis in Mesopotamia was taken in 972. In the 1020s, Emperor Basil II turned to Armenia and Georgia, parts of which were annexed to the Byzantine Empire; with the annexation of the kingdom of Ani in 1045, the Byzantine presence in this region reached its apogee. By that time, all of Asia Minor and parts of Syria, Mesopotamia, and the Caucasus area were in Byzantine hands.

Relations between the Byzantines and their northern neighbors, the Bulgarians and the Rus, ran the gamut of conversion, influence, bitter warfare, conquest, and alliance. The conversion of the Bulgarians in 864 was a major success of the reign of Michael III, ushering in a period of peace; the Serbs, too, embraced Orthodox Christianity between 867 and 874; the conversion of the Rus in 989 is an event of fundamental importance. The Bulgarians posed great danger to the empire in two different periods. In 894 Symeon began hostilities whose ultimate aim was the conquest of Constantinople. The war lasted, with interruptions, until 924 and ended with a compromise. Symeon did not achieve his aims, but he had devastated Thrace and launched destructive attacks on Byzantine territories as far south as the Gulf of Corinth. The second important period began with the rebellion of the Bulgarians soon after the death of John Tzimiskes. Taking advantage of the weakness of the central government and the rebellions of magnates in Asia Minor, the Bulgarians under Tzar Samuel created a large ephemeral state, which included Macedonia, Epiros, part of Albania and the Serbian lands, Thessaly, and Greece up to the Peloponnese. To a significant extent, these victories were made possible by the fact that Basil II had to interrupt his war against the Bulgarians several times to fight in Asia Minor against the rebel magnates and the Arabs.

Eventually a great Byzantine victory at the battle of Kleidion (1014) was followed by the death of the tzar and the dissolution of his state. Bulgaria was annexed to the empire; the entire Balkan peninsula was now under Byzantine sway. Despite rebellions, uneasy alliances, and, in the late eleventh century, Pecheneg raids, the Greek lands of the Balkans never again had to suffer the sustained periods of destructive warfare they had experienced during the reigns of Symeon and Samuel.

Finally, in the West, that is, in Italy and Sicily, the Byzantines had to face both the Arabs and, after 962, the reconstituted western empire with its Italian ambitions. They also had to deal with the papacy. In this area, the ninth century saw reverses and losses of territory to the Arabs, although Bari was recovered in 876. In 867 a first and short-lived schism occurred between the churches of Rome and Constantinople, ostensibly on the issue of the procession of the Holy Spirit (the *filioque*). Venice had remained under the nominal authority of Byzantium, a position reaffirmed in 879. Although in fact the city was independent, its rulers continued to bear Byzantine titles. The importance of Venice is indicated by the chrysobull of 992: Basil II granted trade privileges to the Venetians in return for their continued help in Italian waters.

The reestablishment of the western Roman Empire with the coronation of Otto I in 962 created tensions and rivalries, only partly resolved through the marriage of Otto II to a niece of Tzimiskes. Basil II consolidated the Byzantine possessions in southern Italy, while the western coast of Sicily was recovered under his successors. He was also able to bring the papacy under his control for a number of years.

In terms of domestic developments also, this was a period of recovery, expansion, and consolidation. The state of the economy is discussed in detail in the chapters that follow. Intellectual development had proceeded throughout the iconoclastic period, which had stimulated discourse. In the first half of the ninth century, the figures of John the Grammarian and Leo the Mathematician stand out. Photios was a dominant figure in the recovery and registration of knowledge. The creation of the university at the palace of the Magnaura in the 850s was an important event. The process of what Paul Lemerle has termed the first Byzantine humanism continued throughout the late ninth and tenth centuries. It is characterized by a stress on education, classicism, the edition of texts, and the systematization of knowledge, both ancient and more recent, as exemplified by the large number of compendia and compilations associated with the reign of Constantine VII (913–959).

This is also a period of the rebirth of jurisprudence; indeed the late ninth century has been called a revolutionary one in terms of law. What was at issue was the reorganization of the Justinianic legal system, in both content and form, and its adaptation (never complete) to the needs of the day. The first two Macedonians, Basil I and Leo VI, issued two compact codes, the *Procheiros Nomos* and the *Eisagoge*. The *Basilics*, a large compilation in sixty books based on the entire Justinianic corpus, was issued in its first form by Leo VI; with its derivatives and abridgments, it became the governing body of law, remaining in force for centuries to come. To the same period belongs the extant form of the *Book of the Eparch*, probably issued in 912, which deals with the corporations of Constantinople. Emperor Leo VI also issued 113 novels.

The Byzantine Empire of the tenth century was strong and prosperous within and powerful in the eyes of the world around it. The emperor was at the center of government; power and authority emanated from his person. The Byzantines recognized only one true emperor, one sovereign authority over the Christian world, as there was only one God in heaven. The coronation of the emperor by Christ, as represented in Byzantine art, expresses this view of the imperial office. The large civil bureaucracy and the military derived their power from the emperor. The imperial court was ruled by an elaborate ceremonial, which in some ways was an instrument of government. Projecting order and dignity, it fixed the place of the members of the ruling class in a system dominated by the emperor. The civil and military officials owed both their office and their prosperity to the emperor. In this tax-gathering state, much of the surplus was accumulated in the imperial treasury. It was then distributed in the form of salaries and also spent on buildings, luxuries, and works of art, which in turn enhanced the image of the emperor. Public works, roads, and bridges were in the purview of the state. To his subjects, the taxpayers, the emperor owed justice and protection, in an unwritten and unspoken contract. Protection he certainly provided, through military gains and highly successful diplomacy. The insistence on justice, meaning equity, and frequently associated with fiscality, is an important component of this system.

Society was still relatively flat. The peasant freeholder, paying his taxes to the state, remained at the basis of the fiscal and military system, although revenues from trade had become important. However, peace, expansion, and prosperity also resulted in property accumulation and social differentiation. A powerful aristocracy emerged, which originally owed its strength to imperial office, and now combined that with large landholdings. A series of laws issued by the Macedonian emperors, starting with Romanos Lekapenos' novel on *protimesis* (928) and culminating in Basil II's great novel of 996, marks the effort of these rulers to protect the peasantry, its lands, and its military holdings from encroachment by the powerful. The great aristocratic families were all based in Asia Minor, where the clans of the Phokades, their relatives the Maleinoi, and the Skleroi held vast tracts of land and military office. Eventually they rebelled against Basil II. After years of warfare, and with the help of Russian troops, Basil II was able to emerge victorious. He destroyed the might of the great clans, although the families themselves survived, and in the process gave office and support to a second rank of aristocrats, who were to form the nucleus of the eleventh- to twelfth-century aristocracy. The use of Russian troops, which remained in Byzantine service, is important, as one of the first instances where the medieval Byzantine state relied on preformed troops of soldiers rather than on the thematic armies.

The dynastic stability introduced by Basil I came to a substantive end with the death of Basil II's brother, Constantine VIII, in 1028. Formally, and also in the eyes of the people of Constantinople, the Macedonian dynasty lasted until the death of Empress Theodora, Constantine's daughter, in 1056. However, in the absence of a male heir, after 1028 the dynasty was represented by Zoe and Theodora, who ruled either in their own name for very brief periods of time or through males who owed the throne to them. The period is punctuated by rebellions until 1081, when the accession of

Alexios I Komnenos brought dynastic stability once again. Despite troubles in the Balkans, including a rebellion by Samuel's grandson Peter Deljan, this was a period of peace until the late 1050s, and Byzantium reaped the rewards of peace. Intellectual activity was intense. A university was opened in Constantinople by Constantine IX Monomachos in 1045, with Michael Psellos and John Xiphilinos in charge of the faculties of philosophy and law respectively. Between 1040 and 1050, an unknown compiler put together a collection of the decisions of the imperial judge Eustathios Romaïos. An important source for the administration of justice as well as for the social history of the eleventh century, the *Peira* may also represent an effort at legal innovation.

Because of the relative security, and following developments whose origins lay in the tenth century, the composition of the army changed, native forces being progressively supplanted by mercenaries. The advantage of professionalism must be weighed against the disadvantages of unreliability and cost (some of which was offset by the possibility of buying off one's military obligations). The economic developments of this period will be discussed in subsequent chapters. In social terms, there is a progressive stratification, which continues in the twelfth century, with the establishment of a diversified aristocracy and a strong merchant and artisan class.

Relations with western Europe became much more complex in the course of the eleventh century, because of developments that were to continue through the twelfth century and later. For one thing, western Europe was entering a period of expansion that took many forms—political, economic, and cultural. As far as Byzantium was concerned, the first impact came through the expansionism of the Normans, who had appeared in small bands in southern Italy and began to attack Byzantine possessions in the late 1050s. Under Robert Guiscard, they pursued their attacks, conquering Bari, the last major Byzantine possession, in 1071. Ten years later, they invaded the Byzantine mainland. The Venetians, too, were becoming a naval power to be reckoned with: in 1082, to reward them for their help against Robert Guiscard, Alexios I granted them a chrysobull that became the cornerstone of Venetian commercial expansion into the Byzantine Empire.

A development with important consequences for the future was the break of relations between the papacy and the Byzantine church in 1054. The Great Schism resulted from both long-standing political and theological differences and from circumstances of the moment: the reforming zeal of the pope and the uncompromising natures of Patriarch Michael Keroularios and the papal legate, Humbert of Silva Candida. At the time, the schism did not look permanent, and many efforts to reverse it took place in the eleventh and twelfth centuries as well as in the thirteenth and fourteenth centuries; but in fact it was never healed.

Important military, political, and territorial changes took place in the late eleventh century. In 1071, the year of the fall of Bari, the Byzantines suffered a great defeat in Mantzikert, in Armenia, at the hands of the Seljuk Turks. The Seljuks overran Asia Minor, and within a few years they had settled there permanently. Most of Asia Minor as well as Armenia, Syria, and Mesopotamia were forever lost to the Byzantine Empire. Antioch fell in 1084. Furthermore, the northern frontiers were subjected to nomadic

invasions, especially by the Pechenegs, who by 1090 threatened even Constantinople itself. Thus Byzantium had to face wars on three frontiers, something quite new.

In 1081 Alexios I Komnenos (1081–1118) ascended the throne. A rebel general, he belonged to the aristocracy and married Irene Doukaina, offspring of the most important aristocratic family. His accession to the throne was a triumph for the aristocracy and also was to provide dynastic stability. The Komnenian period is one in which the high aristocracy, especially those families allied to the very large Komnenos-Doukas clan, came into its own.

Fortunately for the empire, the first three Komnenoi—Alexios, John II (1118–43), and Manuel I (1143–80)—were great soldiers and had considerable diplomatic ability as well. Alexios was able to repel the invasion of Robert Guiscard and, in 1108, the one launched by Robert's son, Bohemond. Italy and Sicily, however, were permanently lost to the Normans. Alexios also defeated the Pechenegs in 1091; their destruction was completed by John II. In Asia Minor he was able to launch a counterattack against the Seljuks, helped in part by the presence of the participants of the First Crusade. His son and grandson continued the wars in Asia Minor and Cilicia. They were able to recover all of the littoral and a considerable portion of the hinterland, running roughly from Trebizond to Ankara, to Amorion, to Philomelion. The Norman principality of Antioch became a vassal state, although it always caused problems to the Byzantines. The rest of Asia Minor remained in the hands of the Seljuk sultans of Rum. In 1171 Manuel I was defeated at Myriokephalon by the sultan Kilidj Arslan. Although the results of this event were nothing like those of the battle of Mantzikert, the emperor felt the defeat keenly, and in western Europe the Holy Roman emperor Frederick Barbarossa took it as an occasion to reopen the controversy regarding the title and authority of the two emperors.

Along with Asia Minor, the Balkans were an important area of activity. Significantly, until the late part of the twelfth century it was the western rather than the eastern Balkans that were in the foreground. Here, Hungary was becoming a power to reckon with and had expansionary views on Croatia and Dalmatia. The Hungarians posed major problems for both John II and Manuel I, who dealt with them through a combination of diplomacy, marriage alliances, and war. The Serbian lands were also problematic, with Raška struggling to establish its independence. By the late years of the reign of Manuel, Stefan Nemanja, grand *župan* of Raška, had accepted Byzantine overlordship (1172), while the Hungarians had to return Dalmatia, Croatia, Bosnia, and Sirmium (1167). Thus the entire Balkan peninsula was once again in Byzantine hands. This, however, was not to last for long; during the reign of Andronikos I, Raška became independent, and the Hungarians retook the territories they had ceded.

Bulgaria, under Byzantine control since the days of Basil II, rebelled in 1185. By the end of the century, Kalojan had been crowned by the archbishop of Tŭrnovo, and in 1204 he was crowned by a cardinal of the Roman church. Thus the Second Bulgarian Empire was established, and both Bulgaria and Serbia came, temporarily, under Roman influence—one indicator among many of the political disintegration of the Byzantine state and the importance of western Europe. Political, though not ecclesias-

tical, developments in Serbia and Bulgaria proved irreversible, since neither state came back under Byzantine control.

Relations with western Europe during this period are dominated by the crusades and the Norman threat, which often intersected. The crusades, preached for the first time by Pope Urban II in November 1095, probably owe something to an appeal for help on the part of Alexios I. Help to the beleaguered Byzantine Christians may well have been foremost in the mind of Urban II. However, the crusades formed part of a movement belonging to the movement of expansion of Europe outside its old Carolingian frontiers; and the aim very quickly became Jerusalem, at least in the first instance. The Byzantine Empire saw the passage of large armies in the course of the First Crusade, the Crusade of 1101, and the Second and Third Crusades. Political problems were exacerbated by those of provisioning and currency exchange. Hostility developed very quickly between the Byzantine population, and eventually the emperors, and the crusading armies; calls for the conquest of Constantinople began in the course of the Second Crusade, in the army of the French king, Louis VII. Even earlier, the Norman leader Bohemond had couched his invasion of the empire in crusading rhetoric. The Norman question became intimately tied up with the crusades. One of the first crusader states to be set up in the East was the principality of Antioch, under the redoubtable Bohemond, so that the empire now had the Normans on either side. Furthermore, in 1147 the Norman king Roger II took advantage of the Second Crusade to sack Thebes and Corinth. During the Third Crusade, relations between Frederick Barbarossa (1152–90) and Isaac II Angelos (1185–95) so deteriorated that the German emperor not only sacked Thrace but asked his son to prepare for an invasion of the Byzantine Empire. The tragic events of the Fourth Crusade were not far off.

In the meantime, the Byzantine Empire had developed multifaceted relations with the Holy Roman Empire, the papacy, and the Italian maritime states. The trade privileges to Venice were followed by those to Pisa (1111) and Genoa (1155). However, a number of emperors tried to rescind such privileges or to reject requests that they be granted. This occasioned hostilities culminating in the expulsion of Venetian merchants and the seizure of their property in 1171 and a massacre of the Latins in Constantinople in 1185. Relations with the Holy Roman Empire were friendly as long as the common enemy, the Normans, were seen as the paramount threat. Hence the marriage of Manuel I to Bertha of Sulzbach, sister-in-law of Conrad III. Frederick Barbarossa, however, had ambitions that could not easily accommodate a Byzantine alliance. The strong interest of Manuel I in Italy may be seen in his very expensive and ultimately unsuccessful Italian campaign of 1155–56. It may also be found in his plan to restore the Roman Empire, with a sole civil authority (the Byzantine emperor) and a sole ecclesiastical authority (the pope).

Relations with western Europeans also include those with the kingdom of Jerusalem. Manuel made an alliance with Kings Baldwin III (in 1158) and Amalric (in 1164), both of whom had married Byzantine princesses. He was now the protector of the holy places. The alliance with Amalric involved plans for the conquest of Egypt, which the

king of Jerusalem tried to carry out on his own, and which backfired, as one might have expected.

During the Komnenian period, the Byzantines had very close relations and connections with the West. These included marriage alliances, diplomatic exchanges, travel back and forth, considerable numbers of westerners in the Byzantine army, and exchanges of influence in literature. Despite this close contact, hostility was evident and acute on many political fronts.

Internally, the government of the Komnenoi may be described as one of aristocratic centralization or feudal authoritarianism: its basis was aristocratic, but it retained the power, authority, and wealth of a central state. It was run primarily by the aristocracy allied to the Komnenian family, while the surplus was shared between the state and the aristocracy. Political affairs were stable for a long while, with few rebellions. The armed forces consisted primarily of mercenaries, including Turks, Pechenegs, and, especially under Manuel I, westerners, under the command of Byzantine aristocrats. The transition from a state of peace to a state of war also resulted in efforts to re-create an army that drew its sustenance from the land. The institution of the *pronoia* consisted of the grant (revocable and nonhereditary) of the revenues of particular pieces of land on condition of military service. It appeared in the late eleventh century and spread under Manuel I. Unlike the peasant-soldier of the earlier period, the *pronoia* holder was a privileged individual, who paid no taxes, collected the taxes of the peasants, and also received revenues from rents.

The Komnenian system worked well for a time, and this was a brilliant society, with considerable literary and artistic production. However, the government was extractive and bred disaffection in the provinces. Furthermore, it only worked as long as the aristocracy was satisfied. By the late twelfth century, it would seem that the cohesion between the ruling class and the government began to break down. Ominously, some magnates and aristocrats established independent rule over certain areas: such was the case with Isaac Komnenos in Cyprus, Leo Sgouros in Nauplia and Argos, and possibly Theodore Mangaphas in Philadelphia. There are signs of breakdown in the Byzantine Empire before the Fourth Crusade.

The Fourth Crusade was preached by Innocent IV in 1198. Its members were primarily French, but they were accompanied by Venetians, who also provided the ships. It was originally planned that it should go to Egypt, but a series of diversions eventually brought its armies to Constantinople, which was captured on 13 April 1204. The city was looted mercilessly. A Frankish nobleman, Baldwin, count of Flanders and Hainault, sat on the throne of Constantine, and a Venetian became patriarch. The capture of Constantinople and the events that followed were a profound shock for the Byzantines, who never forgot them.

The conquest of Constantinople altered the situation in the eastern Mediterranean in many significant ways. Most important was the fragmentation of the political space, which never was completely reunited until the Ottoman conquests. A number of small states were established on the soil of the former Byzantine Empire. The Latin Empire

of Constantinople was a very weak feudal state; the most important component was the principality of Achaia, in the Peloponnese, which survived after 1261. The Venetians had acquired a number of coastal and insular possessions, the most important of which were Coron, Modon, Crete, Euboea and other islands of the Aegean, and the Ionian islands. In western Greece, the despotate of Epiros extended over Epiros, Aetolia, and Akarnania. In Asia Minor, the empire of Trebizond had been established in 1204. The empire of Nicaea, created by Theodore I Laskaris, a son-in-law of Alexios III Angelos, came to include virtually all of Komnenian Asia Minor, except for the part that belonged to Trebizond.

The despotate of Epiros and the empire of Nicaea were the most important Greek states. The empire of Nicaea was quite powerful, especially during the reign of John III Vatatzes (1222–54). It was a well-organized state, which managed not only to hold its own against the Seljuks, but even to profit from the fact that the Mongol invasions weakened the power of the Turks. It was also an irredentist state, as was the despotate of Epiros, both aiming at the reconquest of Constantinople. The situation was complicated by the existence of the Serbian state (which received an autocephalous archbishopric from Nicaea in 1219, while Stefan the First-Crowned had been granted the title of king by Pope Honorius III in 1217) and especially the Second Bulgarian Empire, which reached a high point under John II Asen (1218–41). Thessalonike, a great prize, was conquered by Theodore Doukas Angelos of Epiros in 1224, and then by John Vatatzes in 1246. The Bulgarians, who had established in Tŭrnovo a patriarchate, recognized by Nicaea, entered the race for Constantinople. In the end, however, the city was reconquered by Michael Palaiologos, who was co-emperor along with the young John IV Laskaris of Nicaea (1261). Soon thereafter John IV was blinded and deposed. The last Byzantine dynasty, the Palaiologoi, was to rule until the fall of Constantinople to the Ottomans.

With the reconquest of Constantinople, the orientation of Byzantine policy changed abruptly. Asia Minor, loyal to the Laskarids, was neglected and overtaxed, an easy prey to Turkish attacks. Michael VIII and his successors had to deal with recurrent aggressive schemes on the part of western Europeans, and at the same time were engaged in a policy of reconcentration of the fragmented territories over an area more or less that of the modern Greek state. Michael VIII was a consummate diplomat, who was able to thwart the dangerous plans of Charles of Anjou to retake Constantinople. Faced with the western threat, he was forced to accept the union of the Byzantine and Roman churches. The Union of Lyons (1274) was opposed by a large part of the population and was abandoned by his son. As for western plans for the reconquest of Constantinople, they lost their force after 1311.

The policy of reuniting the fragmented territories was vigorously pursued by Michael VIII, Andronikos II (1282–1328), and Andronikos III (1328–41). Michael fought against the principality of Achaia, recovering Monemvasia, Geraki, and Mistra. In Bulgaria, he was able to take a number of the Greek-speaking cities of the Black Sea coast, which were particularly important for the provisioning of Constantinople. He

also made alliances with the Mongols, both the Ilkhanids of Persia as a defense against the Turks, and the Golden Horde, against Bulgaria. The Mongol alliance was useful to his successor as well. On the other hand, Michael VIII and his successors gave extensive commercial, judicial, and other privileges to the Italian merchants, primarily the Genoese and the Venetians, who now dominated the commerce of the area. Michael gave to the Genoese quarters in Pera, which eventually became a powerful colony, and ceded to the Zaccaria family the city of Phokaia with its important alum mines. In 1305 the Zaccaria occupied the island of Chios, which remained in Genoese hands until 1556.

The Byzantine reconquest of splinter states in Epiros, Thessaly, and the Peloponnese continued under Andronikos II and Andronikos III. Thessaly was acquired piecemeal in 1333. The despotate of Epiros came into Byzantine hands by 1340; Ioannina had accepted Byzantine suzerainty in 1319. The Byzantine possessions in the Peloponnese were organized as the despotate of the Morea in 1349. When the rest of the empire crumbled, this remained as its most cohesive and vital part. To be sure, the Serbs had taken Dyrrachion in 1296, and part of Macedonia was given to Stefan Uroš II Milutin as the dowry of his Byzantine bride. But on the whole the reconquest of the splinter Greek states and the Peloponnese was achieved, with the exception of Attica and Boeotia, which formed the Catalan duchy of Athens that lasted until 1388. In Asia Minor, on the other hand, one disaster followed another. The Ottoman Turks emerged as an expansionist emirate on land in the late thirteenth century, while the coastal emirates were engaged in piratical activities in the Aegean. After the Byzantine defeat at the battle of Bapheus (1302), and despite the efforts of Andronikos II and Andronikos III, Asia Minor rapidly came under Turkish control. The fall of Prousa (1326), Nicaea (1331), and Nikomedeia (1337) sealed the fate of Bithynia, now firmly in Ottoman hands. The southern cities—Ephesos, Tralles, Smyrna, Miletos, and Sardis—were conquered by the Seljuk emirates in the first decade of the fourteenth century. Only Philadelphia remained, until 1390.

The Palaiologan state had a certain vitality until the middle of the fourteenth century. Despite the granting of privileges to the church and to private individuals, the state still had resources, exercised a heavy fiscality, and was able to undertake military expeditions and carry out a foreign policy that, given the complexities of the times, was successful. By comparison with the past, however, everything was small scale: the extent of the state, its revenues, its armed forces. When, in 1321, Andronikos II subsidized a campaign with 50,000 hyperpyra, this was impressive given the circumstances; but it was a very long way from the 2,160,000 gold coins spent by Manuel I on his Italian campaign. The army was also small, while the fleet was scuttled in 1285, although small fleets were later reconstituted upon occasion. The military forces consisted of mercenaries (with sometimes disastrous results) and native forces. The latter were made up of *pronoia* holders, who still received their *pronoiai* from the state, although some of these lands became hereditary. The aristocracy was powerful, and some families were very rich indeed. The church, especially the monasteries, was also

becoming very wealthy. The cities profited, to some extent, from trading activities, although there were considerable social tensions. Thessalonike was a very important political, economic, and cultural center.

There were, in this period, impressive intellectual and artistic achievements. Highly educated intellectuals produced works of philology, theology, astronomy, mathematics, geography, and rhetoric. Literary works were produced both in erudite Greek and in the popular language. Important works of art include the mosaics and frescoes of the monastery of the Chora (Kariye Camii) in Constantinople.

By the middle of the century, this entire edifice had crumbled as a result of two civil wars, the first between Andronikos II and Andronikos III in 1321–28 and the second and by far the most destructive one (1342–54) between John Kantakouzenos and the regency for the young John V. The second civil war, which began as a struggle for power in the center, soon spread throughout the state and acquired strong social overtones, as the landowning aristocracy by and large supported Kantakouzenos, while the merchants and sailors on the whole supported his arch-rival, the *megas doux* Alexios Apokaukos. The civil war ended with the victory of Kantakouzenos and the aristocracy; but in 1354 John V Palaiologos returned to the throne in Constantinople, and John VI Kantakouzenos was forced to abdicate. The most disastrous aspect of the civil war was that both sides, but most importantly that of Kantakouzenos, appealed to foreign powers for help. Serbia had been engaged in an expansionary policy since the last part of the previous century. Rich because of the exploitation of silver mines, its rulers could harbor great ambitions. Stefan Dušan took advantage of the civil war to intervene, ostensibly in favor of John Kantakouzenos, but, as it soon became evident, in truth to serve his own purposes. Within a few years he conquered much of Macedonia, Thessaly, Epiros, and part of Greece, without, however, being able to take Thessalonike. The conquest of Serres in 1345 allowed him to call himself emperor of the Serbs and the Romans. His ephemeral state did not survive his death in 1355. It split into a number of fragments unable to withstand the Ottoman advance. For the Turks were the real victors of the civil war. Both the emir of Aydin and the Ottomans, under Orhan, sent armies to help Kantakouzenos. By 1354 the Ottomans had established themselves at the strategic stronghold of Gallipoli and from there carried out their conquest of the Balkans.

After the end of the second civil war, Byzantium was an empire in name only. Its territories were greatly reduced and dispersed, consisting of the capital, Thessalonike and its hinterland, the islands of the northern Aegean and the despotate of the Morea. The second half of the fourteenth century was a critical one for the southern Mediterranean too. The Black Death, which had struck the Byzantine Empire as well as the Italian city-states and all of Europe, had brought about a grave demographic crisis. In politics, that translated into exacerbated antagonisms between Venice and Genoa, played out in the eastern Mediterranean. Such was the war of Tenedos (war of Chioggia), in 1377–81, which involved the Byzantines as well. The Byzantines, with no resources, few armed forces, and always embroiled in dynastic quarrels, were virtually

incapable of an independent foreign policy. The Ottomans, the Venetians, and the Genoese supported different factions of the imperial family.

Meanwhile the Ottoman advance continued. Didymoteichon fell in 1361, Philippopolis in 1363, and Adrianople, which was to become the first European capital of the Ottomans, in 1369. An important turning point was the battle of the Marica in 1371, in which the forces of John Uglješa of Serres were defeated. After that, the entire countryside was overrun by Ottoman armies. The Byzantine Empire became tributary to the Ottomans. In despair, Manuel Palaiologos took half the properties of the monasteries of Mount Athos and the church of Thessalonike in order to give them out as *pronoiai*. Some of these lands were returned to the monasteries after 1403. Thessalonike itself fell to the Ottomans in 1387; this first occupation lasted until 1403. The Ottoman victory against the Serb and Bosnian armies at the battle of Kosovo Polje, in 1389, opened the way into Serbia itself.

To all of this the Byzantines could counter very little. One approach tried by every emperor was to request aid from western Europe. But, except for small expeditions, and the disastrous crusade of Nikopolis (1396), little aid was forthcoming, since the support of the papacy was predicated upon the union of the churches, a very unpopular issue in Byzantium.

Among the important consequences of the crisis of the second half of the fourteenth century was the increased role of the church and, in particular, of the monasteries of Mount Athos. The church had already expanded its role in the earlier part of the century, for example, in the realm of justice. After the civil war, the Athonite monasteries profited from donations on the part of Stefan Dušan and privileges granted by the Ottomans. They also profited from the transfer of landed property that the aristocracy was unable to exploit. Mount Athos became the richest and safest part of the empire, whoever held political power over it. The church also enjoyed, throughout the Orthodox world, prestige and spiritual power, which it was to retain after the fall of Constantinople.

A long blockade of Constantinople by the sultan Bayezid in 1394–1402 almost spelled the end of the Byzantine Empire. The city was saved not from the West, but from the East: Bayezid was defeated by the Mongols under Timur (Tamerlane) at the battle of Ankara (1402), and this granted the Byzantines another half century of life. Indeed, the battle of Ankara led Bayezid's son Süleyman to sign a treaty with the Byzantines by which he gave up the tribute exacted until then and returned to Byzantium a strip of territory from Panidos in the Propontis to Mesembria, a few islands, a few coastal towns in Asia Minor, and, most importantly, Thessalonike and Chalkidike. Thus there was a political restoration of sorts between 1403 and the 1420s. But the respite was temporary. By the 1420s the Ottoman state had been reorganized, and their expansion continued. To avoid Ottoman occupation, Thessalonike surrendered itself to the Venetians, who held it until its conquest by the Turks in 1430. Ioannina fell in 1430 as well, while incursions had started into the Morea. In 1437 Emperor John VIII went to Italy to ask for help. On 6 July 1439, the union of the churches was proclaimed,

but accomplished little beyond exacerbating the divisions within Byzantium, where the union was much hated. Finally, after a fifty-two-day siege by land and by sea, the city of Constantine was conquered by Mehmed II, on 29 May 1453. The despotate of the Morea was taken in 1460, and Trebizond in 1461.

Constantinople, at the time of its fall, had become a phantom of its old self: a small, underpopulated, poor, fearful, and isolated city. Nevertheless, its conquest had a tremendous psychological effect on all the Orthodox populations and even in western Europe. For in the fall of the city of Constantine, they recognized the complete and permanent end of the Byzantine state.

Physical Factors in the Evolution of the Landscape and Land Use

Bernard Geyer

Part 1: Geographical Determinants of the Byzantine Agrarian Economy

From a geographer's point of view, the Byzantine Empire developed within a context that was basically, though not exclusively, Mediterranean. The relevant criterion for a Mediterranean climatic zone is one in which olives can be cultivated,¹ often in association with non-irrigated cereals and vines, and this applies to the narrow indented peninsulas of Italy and Greece, the jagged coastlines of the western front of Asia Minor and the islands of the inland sea (Fig. 2). However, in places where the peninsulas spread out (as in the northern Balkans and in Anatolia), where the continental influence prevails (as in Syria), and where the altitude produces a cool and humid climate, the Mediterranean influence diminishes and is restricted to a narrow belt along the coastline (as in the former Yugoslavia and along the southern front of Anatolia). In other places, however, it does not disappear completely, except perhaps in the regions of the Danube or along the southern littoral of the Black Sea (Trebizond); it is affected by varying degrees of degradation, allowing the particular features of adjacent bioclimatic zones to appear. Great as is the diversity of the Mediterranean world's potential, this does not in itself explain why the empires that grew up along the shores of the inland sea were so powerful. Whether they arose by chance or out of necessity, the wealth, diversity, and longevity of these empires can only be explained by taking the influences and contributions from these simultaneously adjacent and more continental areas into account.

This chapter was translated by Sarah Hanbury Tenison.

¹ P. Birot and P. Gabert, *La Méditerranée et le Moyen-Orient*, vol. 1, *Généralités, Péninsule ibérique-Italie* (Paris, 1964), 69. For a detailed geographical study of the whole of the Mediterranean and the Middle East, readers are referred to the above volume and to P. Birot and J. Dresch, *La Méditerranée et le Moyen-Orient*, vol. 2, *Les Balkans-l'Asie mineure-le Moyen-Orient* (Paris, 1956). Briefer geographical syntheses more specifically concerned with the Byzantine world have been published, notably, M. F. Hendy, *Studies in the Byzantine Monetary Economy c. 300-1450* (Cambridge, 1985), and M. Kaplan, *Les hommes et la terre à Byzance du VI^e au XI^e siècle: Propriété et exploitation du sol* (Paris, 1992).

Arising as it did along the shores of a closed sea with little space for development, the Byzantine Empire, by transcending its original boundaries, was able, for a time at least, to annex a complementary space that was indispensable to its survival: the Danubian plains,² the Anatolian plateau, and, prior to these, the Syrian plateau and the Nile delta, all potentially great cereal-producing regions and a resource that formed part of its power base.

*A Vigorous and Compartmentalized Relief, the Expression
of a Complex Geological Structure*

Vigor, complexity, and instability are the terms that best describe the Mediterranean relief. It appeared, for the main part, at the time of the alpine orogenesis, following the collision of continental plates which produced a complex tertiary and quaternary tectogenesis,³ in which folds and accidents resulting in breaks, gave rise to mountain chains with a marked relief.⁴ Clearly, this structural history is too complicated to be discussed here. We need only recall that it lies at the origin of the region's compartmentalization, divided into small units that were further subdivided by a process of morphogenesis.

The totality of the Mediterranean sphere, which is of interest to us here, is characterized by the interlinkage of natural units and by the exiguity of topographical areas. Thus, while the Balkans present a generally massive aspect, looked at closely, the mountain range is broken up by corridors, basins, and depressions. The same applies to the whole western front of Asia Minor, where the mountains frequently plunge directly into the sea, producing a deeply indented coastline. In both cases, the intermingled landscapes witness to the complexity of the structure and allow the volume of mountains greatly to exceed the plains. These are young mountains, with steep slopes and deep valleys that allow little room for level surfaces, although the latter are not entirely absent. Consequently, we need to stress the importance of the plains of Cilicia and Pamphylia, as well as those of Bithynia in Asia Minor; also of part of Thrace and the Hebros (Maritza) valley, the valleys of the Strymon, the Axios (Vardar), the Aliakmon rivers in Macedonia, and the plain of Pinios in Thessaly. To these can be added regions of low plateaus, such as those in Apulia and in eastern Basilicata.⁵

The mountains include some approximately horizontal places: old surfaces, structural or the result of erosion, high plateaus, cut out and cut up in the course of a long geological history, as in eastern Macedonia or Bithynia (Fig. 3).⁶ However, these flat

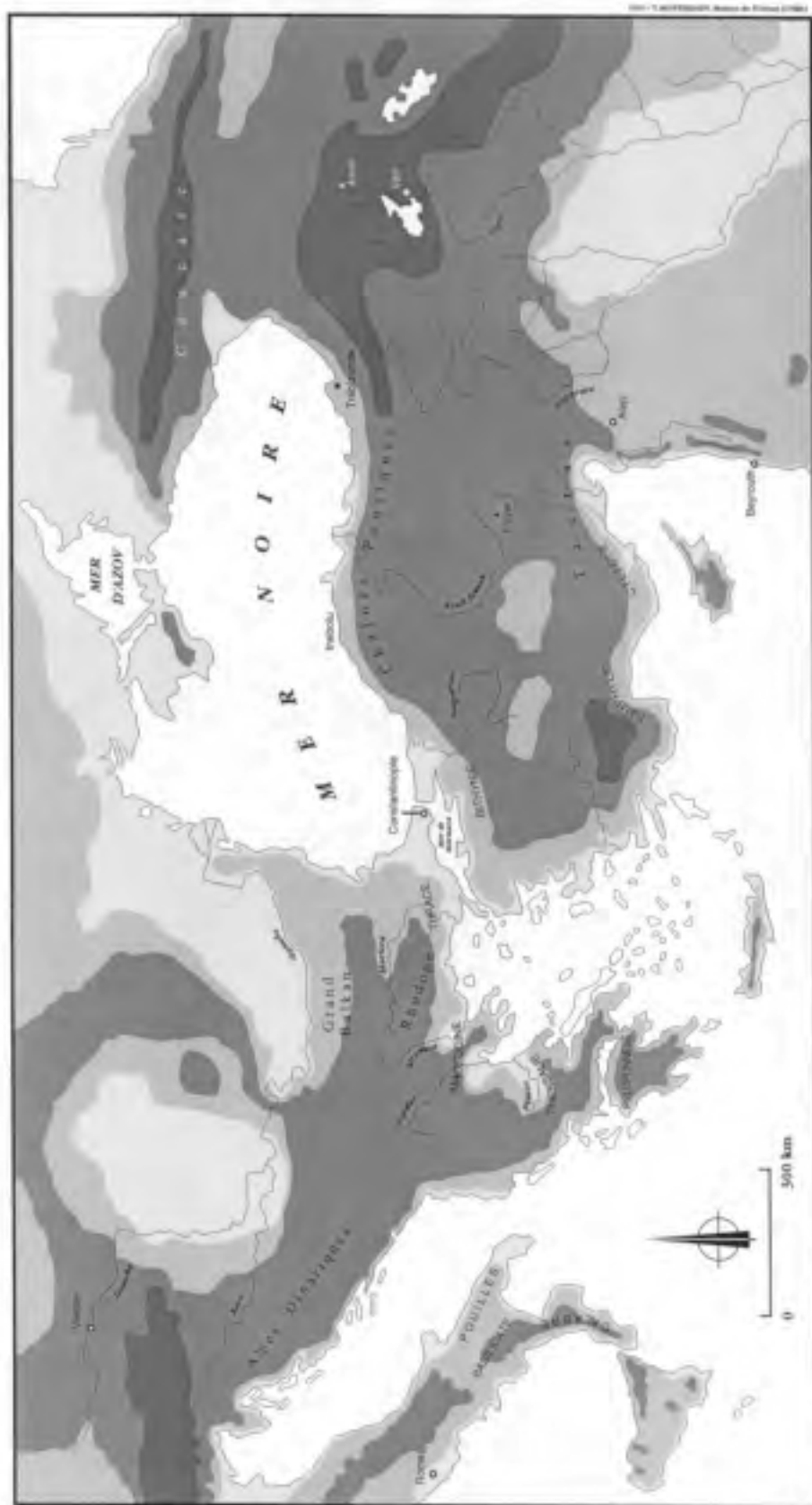
² The term *plain* is here used in the broad sense and indicates, more than the valley itself, the whole system of pediments and hills that dominate it, notably to the south.

³ This tectogenesis still occurs, manifesting itself in a high degree of seismicity.

⁴ Birot and Gabert, *La Méditerranée et le Moyen-Orient*, 1:13, and J.-J. Dufaure, ed., *La mobilité des paysages méditerranéens: Hommage à Pierre Birot* (Toulouse, 1984), chap. 2, pp. 50ff.

⁵ J.-M. Martin, *La Pouille du VI^e au XII^e siècle* (Rome, 1993), 64.

⁶ P. Bellier et al., *Paysages de Macédoine: Leurs caractères, leur évolution à travers les documents et les récits des voyageurs* (Paris, 1986), 41. B. Geyer, J. Lefort, and F. Planet, "Prospection dans la région de Bursa, 1990," *IX Araştırma Sonuçları Toplantısı* (Ankara, 1992), 114.



1. Localization map



2. Climatic limits to olive cultivation (after P. Birot and P. Gabert, *La Méditerranée et le Moyen-Orient*, vol. 1 [Paris, 1964]: (1) limit set by cold weather in winter; (2) limit set by cold weather in winter and damp weather in summer; (3) limit set by damp weather in summer; (4) limit set by aridity; (5) cold and dry wind.



3. A classic type of siting during the Byzantine and Ottoman periods: a Bithynian village situated on a mountain ledge, which exploits the level surfaces for the purposes of agriculture and the slopes for stock-raising and timber



4. A marginal type of siting: a Bithynian village situated at the bottom of the valley, at the head of a river system, whose territory is composed almost entirely of sloping and fragile valley sides



5. Marked aridity on an exposed south-facing slope in Macedonia (photo: Jacques Lefort)



6. A state of extreme degradation on calcareous slopes that were previously farmed (terrace cultivation on south-facing slopes) and subsequently abandoned, in the Alaouite djebel, Syria



7. Badlands developed on marly rocks as a result of overexploitation, Macedonia (photo: Jacques Lefort)



8. Immediate effects of erosion on the coastal slopes of Chalkidike: in the aftermath of a storm, streams of mud run down to the sea and disperse in the water (photo: Jacques Lefort)



9. Long-term effects of erosion in the Yalakdere basin, Bithynia: a historical alluvial formation at the bottom of the valley

surfaces constitute the exception: two-thirds of the Balkans consist of mountains, and the proportion is higher if one excludes the Danubian plains, which are basically extra-Mediterranean. Only 10% of Anatolia consists of coastal plains and valleys,⁷ apart from the huge internal plateau, which is also extra-Mediterranean. We must also stress the importance of prograded coasts, notably the deltas that were built up at the outlets to the watercourses. The lands thus gained from the sea are the result of the rivers' considerable alluvial load, itself due to the vigorous relief, to strong variations in the rivers' flow, and to the frequent rainwash on the slopes.⁸ Both depressions and bays were gradually filled by alluvial deposits, resulting sometimes in considerable gains of land with a strong agricultural potential. The tides are not very high, so these gradually built-up surfaces, which even small rivers are capable of creating,⁹ were already in existence during the Byzantine period. Unfortunately, they tend to be insalubrious marshland, established at the back of lagoon coasts or in depressions with inadequate drainage, and have been breeding grounds for malaria. Exploiting them has almost always required extensive prior improvements to the land.

Given that the Mediterranean landscape is clearly mountainous, it does not offer much in the way of large terrains suitable for growing cereals (Fig. 4). On the other hand, as we will see, it is better suited to the cultivation of trees, a process whereby the previous natural vegetation forms are preserved in an artificial arrangement.

The continental regions situated on the margins of the Mediterranean area present greater expanses of flat or gently sloping surfaces. Thus we find the high valley of the Hebros (Marica) in the northern part of the Balkan peninsula and, beyond the mountain chain of the great Balkan, the hills and glacis that descend to the Danube or, further northeast, to the Sava valley. The paths of all these great watercourses were determined by this structure; over time, large valleys were gradually carved out which are abundantly covered by the alluvial deposits of the watercourses. The peninsula widens to the north, providing space for these great rivers, which could not spread out within the densely packed massifs in the southern Balkans. The interior of Anatolia presents another instance of huge and relatively level expanses. In fact, we find there a very large and complex plateau, surrounded by mountains, and constituted in the main from old erosion surfaces, dissected into stacks from 1,000 m to more than 1,500 m high. Some endoreic, karstic, and/or tectonic depressions have gradually been excavated. Fairly modest massifs dominate, which often have very individual features: horsts and residual or volcanic reliefs (Erciyes Dag).¹⁰ Only in the east do the mountains exhibit a vigor that is exceptional for the region, with the Taurus massifs, the eastern Pontic chains, where the drainage once again becomes exorheic. So, while these very different topographical zones reveal contrasts, they also share some complementary features. The economic consequences arising from this were also influenced by climatic factors.

⁷ Hendy, *Studies*, 26.

⁸ Birot and Gabert, *La Méditerranée et le Moyen-Orient*, 1:27.

⁹ *Ibid.*

¹⁰ Birot and Dresch, *La Méditerranée et le Moyen-Orient*, 2:140.

Differentiated Climates

Mild, humid winters and long, dry, hot summers with few rainy days (though precipitation can be very heavy and vary greatly from year to year) are the principal characteristics of the eastern Mediterranean climate. However, the word that best defines its harsh reality is "arid."¹¹ In contrast with regions designated temperate, the life cycle of the vegetation is determined here not so much by the way the temperature evolves as by the absence of water. The dormant season is the excessively dry summer and not the winter, which is not very severe. These circumstances need to be specified, especially in relation to the duration of the biologically dry season¹² and to regional variations that are linked to, among others, latitude, continentality, and, finally, altitude.

As we have seen, the Eumediterranean region is generally limited to a littoral zone and a close-lying hinterland and experiences between three and five dry months on average. Two types of climate can be distinguished by latitude.¹³ The southern Mediterranean includes, among others, Sicily, the Peloponnese, Crete, the southern coast of Anatolia, and the Syrian coastline. There the year has but two seasons, alternating very hot summers (four to five months minimum) with very mild winters, during which most of the rainfall is concentrated. The climate of the northern Mediterranean is less clear-cut with regard to plant life, since the rainfall peaks twice: in autumn (generally the greater maximum) and in spring. The dry summer season is shorter (generally two to three months), although the very distinctive relief in the peninsulas favors currents of cold air (*boras, meltemi*) that can harm plantations, particularly young plants, even in the middle of the summer.

Local or regional conditions do, of course, introduce a number of slight differences: well-watered or, conversely, excessively dry sectors exist within both types of climate, depending on relief, exposure, and altitude (Fig. 5). Elevation is the key to the varied mountain climates, characterized by more severe winters (often with snow, which favors water retention for the summer) but also by a slight attenuation of the dry season. To the north of the area under consideration here, falling temperatures in winter and the increased precipitation produce islands with a temperate climate, more favorable for vegetation. In the south, on the other hand, these modifications give rise to a mountain climate with cold, arid winters.¹⁴ The exposure can be felt over a large scale; thus the western slopes of the peninsulas are more favored than the eastern ones, not only because they derive greater benefit from atmospheric disturbances from the west dur-

¹¹ Birot and Gabert, *La Méditerranée et le Moyen-Orient*, 1:45.

¹² There are many ways of defining the dry season or the degree of aridity. These have given rise to a number of formulas and indicators for expressing the relationship between temperature and rainfall. The simplest such definition (with regard both to the calculation and its interpretation) is the one proposed by H. Gaussen, *Expression des milieux par des formules écologiques: Leur représentation cartographique* (Paris, 1954), 13–23: a month is "dry" when the total precipitation (in millimeters) is lower than twice the thermal average (in Celsius).

¹³ Birot and Gabert, *La Méditerranée et le Moyen-Orient*, 1:57.

¹⁴ *Ibid.*, 60.

ing the wet season, but also because during the dry season they experience high levels of relative humidity that minimize the effects of the aridity, and, finally, because they are protected from polar currents of air blowing from the northeast. Slight local variations are just as important: sheltered sites, exposure on the sunny or the shady side, and so on, give rise to as many microclimates. Thessaly is a particularly striking example of this, where the scarcity of trees and the absence of olives¹⁵ are due to very low and late thermic *minima*, and consequently there is greater recourse to cereal cultivation. The fact remains that in the eastern Mediterranean, the growing season is short, an inconvenient feature that is further aggravated by the irregular nature of precipitation from one year to the next.

Production and harvest, particularly in the case of annual plants, depend more on the pattern of rainfall than on its annual volume, which, in theory at least, is always sufficient. Thus the Anatolian plateau, in spite of its long dry season (more than five to six months) and relatively scanty precipitation (which can shrink to less than 200 mm per year), is relatively favorable to the cultivation of cereals (winter cereals¹⁶) thanks to a pattern of rainfall that is characterized by a spring maximum.¹⁷ For their part, the Balkans form a more complex territory in terms of climate. The low-lying regions in the south of the peninsula (southern Macedonia) benefit from a typical Mediterranean pattern with maximum rainfall in winter; the low level of loss due to evapotranspiration allows aquiferous reserves to be formed, which can be used during the dry season. This type of region turns out to be particularly adapted to arboriculture. Macedonia and the former Rumelia (excluding southern Thrace) are already marked by a dual maximum (spring and autumn), but the winter rains are still heavier than the summer ones. It is only on drawing closer to the interior mountain chains of Yugoslavia and the Rhodopes that the inverse situation is found, with more rainfall in summer than winter: we are changing worlds and entering the sphere of the Danubian rainfall patterns. The summer maximum is the rule from the Balkan massif in the east and from the Sava basin in the west. The Pontic coasts also benefit from particular climatic conditions, given that the region of Inebolu, like that of Trebizond, does not suffer from a dry season and the summer precipitation is abundant.

The interesting aspect of these slight climatic variations, produced by different rainfall patterns, lies in the way they give rise to phenomena of complementarity. Thanks to this, the different regions of the empire were, finally, capable of ensuring medium yields and minimal harvests, unless they were exposed to very extreme climatic setbacks.

¹⁵ Birot and Dresch, *La Méditerranée et le Moyen-Orient*, 2:61.

¹⁶ The reference to dry crops is primarily to barley, which is a hardier species than wheat and better adapted to these extreme conditions.

¹⁷ At least 250 mm/year is required to ensure regular (75%) harvests when the pluviometric maximum occurs in winter, as for instance on the Syrian plateau, and up to 350 to 400 mm/year, when it occurs in autumn, as is the case in North Africa. H. N. Le Houérou, "The Arid Bioclimates in the Mediterranean Isoclimatic Zone," *Ecologia Mediterranea* 8.1/2 (1982): 103–14.

Fragile and Frequently Poor Soils

The relatively low fertility of Mediterranean soils must be emphasized. High summer temperatures, exhausted soils, low humus content, and the fragility of the soil due to rainwash are among the many elements that explain this situation. This relative poverty is linked to an already strongly degraded natural environment. Under a Mediterranean climax, well protected by vegetation, these soils could offer good conditions for agriculture. It was the disappearance of the original plant cover that revealed their fragile nature, exacerbated by the steep slopes. Soil impoverishment occurred rapidly: on hard rocks (e.g., limestone), which lie most frequently on the surface, pedogenesis is too slow (Fig. 6), while on soft rocks (e.g., *marl*) erosion is too rapid (Fig. 7). In places that are dry during the summer, it is the soil's capacity for water retention that determines the nature of the agriculture. Water retention decreases rapidly as a result of degradation, even in the case of *terra rossa*, the most characteristic soil of the Mediterranean region. Red soils, developed on limestone, are, however, still among the most fertile in places where they have withstood erosion. Soils on siliceous rocks are poor because they are too thin to store water and are easily leached. Finally, the best soils are those that have developed on a sandstone or sandy substratum, thanks to their ability to store water reserves.¹⁸ Unfortunately, all these soils tend to be discontinuous. Soil on limestone now only remains in the *dolines*, *poljes*, and clefts and pockets of the karst. Even on gently sloping terrains, which are a priori more favorable, the siting can be critical. The soils are still vulnerable to violent downpours that attack surface formations and undermine alluvial terraces. Erosion can dislodge old calcareous crusts at the base of slopes or on the glacis, sometimes right on the old Pleistocene terraces. Only the flat alluvial valley bottoms present more favorable conditions, because of the soils that, in spite of being young, are also deep and easily capable of storing water, sometimes excessive quantities of it. Even in this case, however, it is important to note the nuances. Alluvial bottoms of recent origin were not always accessible to man, notably during the accumulation phase. Furthermore, flooding is too frequent, almost regular, especially in the downstream parts of the valleys, which also happen to be the largest.

Thus good agricultural soil represents only a small part of the land in the Mediterranean world, and man had to learn how to adapt agricultural practices to this very constricting situation, for instance, by building terraces (dedicated especially to arboriculture) and by adopting extensive modes of stock raising.

Degraded Landscapes, Strongly Marked by Man

The climax, that ideal state of equilibrium between the environment's different components, no longer exists in the Mediterranean and hardly at all in the peripheral zones. Sometimes a new equilibrium is established in a degraded context, and a secondary

¹⁸ Birot and Gabert, *La Méditerranée et le Moyen-Orient*, 1:134.

climax can be observed, a sort of subproduct of what existed prior to human intervention. The landscape generally appears as a mosaic, in which degraded “natural” spaces interlink with agricultural lands. The physiognomy of the former depends greatly on the substratum. On limestone, the oak forests have been overexploited and affected by grazing and burning, and have given way to *garrigue*, an open plant community with plenty of rocky outcrops, where rainwater infiltrates rapidly through gaps in the karst. This produces an apparently dry environment, which is actually less degraded and richer, notably in terms of pasture, than the vegetal formations that are established on siliceous ground. The latter are more closed, allowing water to run off, with the result that the land is impoverished. The forest’s process of degradation to *maquis* and then very poor *cistaie* is here generally inexorable and practically always irreversible. A similar contrast recurs with regard to cultivable lands, which are discontinued on limestone and very poor on siliceous rocks. In every case, the destabilizing factor is directly linked to the steep slopes that are generally present throughout the Mediterranean world.

This allows us to understand better the great advantage that accrues to the flat surfaces on uplands (up to 1,500 m, even 2,000 m), which were farmed very early, during the Roman era in Bithynia, for instance.¹⁹ This aspect also confers importance on regions outside the Mediterranean. Finally, the same factors drew settlers into the valley, even when the latter presented specific problems. All these territories offered the possibility of producing crops to complement the Mediterranean, primarily orchard-based, varieties within the framework of an intensive polyculture. Though arboriculture was more profitable than cereal production,²⁰ it was still necessary to preserve a relative equilibrium between these two modes of land use.

Part 2: Transformations to Landscapes: The Evolution of Land Use in the Byzantine World

Were the landscapes of Byzantium very different from those of today? Can they be considered to have been potentially richer and subsequently impoverished by degradation, or, alternatively, to have been subsequently regenerated? Though the present state of the environment represents our principal means of comparison, it can provide only imperfect answers to these questions. The course of its evolution has been muddled by the interaction of the consequences arising from the natural dynamism of the various environments, from climatic fluctuations (which, though real enough, were not very great and are hard to quantify), and from human intervention. Some characteristic features of the Mediterranean area and peripheral regions did, however, have a particular effect on the way they evolved.

¹⁹ Geyer, Lefort, and Planet, “Prospection dans la région de Bursa,” 115.

²⁰ Birot and Gabert, *La Méditerranée et le Moyen-Orient*, 1:137.

The *relief*, as we have seen, is dissected and vigorous. Though low, the slopes are steep, and, once their fragile covering of vegetation has been attacked, they are very exposed to the risk of erosion from the effects of intense and sporadic rainfall on ground that is often dry. We are dealing with an area that has a high potential for negative evolution. The commonest manifestations of its vulnerability are torrentiality, mass movement, and gullying. The substratum, for its part, consists of hard rocks whose pedogenesis is too slow and soft rocks whose morphogenesis is too swift, allowing regeneration to take place only over the long term and only when the degradation is not too far gone. When this is the case, the recovery of land that has been excessively impoverished is problematic, if not impossible. Thus degradation can be irreversible on the human scale. For this reason, areas that were farmed during the Byzantine period are abandoned today.

Seismic shocks have also to be taken into account. Resulting from the activity of tectonic plates,²¹ they occur frequently and often violently, especially in the eastern Mediterranean, most particularly along its northern shore, where they continue to present a serious threat to the population as well as being an efficient agent of morphogenesis. The social organization is weakened by the destruction of buildings and the disruption of communication systems, by the repercussions on the health of the population, by the threat these present to the political order, and so on. Ecological systems are affected by landslips or rockslides; slopes and their cover of vegetation can be rendered permanently fragile, and the shape of the coastline can change (threatening the viability of ports, for instance).²² However, the real effects of seismic activity are primarily regional and sometimes even only local. Unless they follow a period of serious disruption consequent on another natural catastrophe or an economic depression, earthquakes may, on the whole, be considered to involve bearable social and material costs, on the same order, for instance, as the ravages inflicted by swarms of locusts.²³ The latter, however, tend, though not exclusively, to infest coastlines and islands in the southern Mediterranean.²⁴ In both cases, the affliction is characterized by both its regional impact and its frequently repetitive nature. The ensuing reaction is often one of adaptation and even socialization.²⁵ Therefore, without wishing to diminish their importance, we can assume that seismic shocks, on account of their singular and violent nature, had fundamentally more of an impact on mentalities than on the evolution of landscapes (on the human scale), and consequently on the economic history of Byzantium.

The *climate*, such as we know it today or, viewed historically, with some mild variations (see below) played what may be considered a secondary role. Indeed, when the

²¹ Dufaure, *La mobilité des paysages méditerranéens*, chap. 2, 50 ff.

²² For a detailed analysis of the nature and history of the incidence of seismic shocks in the Mediterranean region, see Dufaure, *La mobilité des paysages méditerranéens*, chap. 9, 278–301.

²³ In 1034, an invasion of locusts in Asia Minor obliged the inhabitants to abandon their property, sell their children, and flee to Thrace. Cf. N. Svoronos, *Etudes sur l'organisation intérieure, la société et l'économie de l'Empire byzantin* (London, 1973), 12.

²⁴ B. Bousquet and P.-Y. Péchoux, "Géomorphologie, archéologie, histoire dans le bassin oriental de la Méditerranée: Principes, méthodes, résultats préliminaires," *Méditerranée* 1 (1980): 36.

²⁵ Dufaure, *La mobilité des paysages méditerranéens*, 300.

evidence for the way landscapes evolve (colluvial at the base of slopes and, more often, alluvial formations on valley bottoms) is analyzed, it appears to show, in terms of historical periods, very brief, often even abrupt, phases of sediment deposits, lasting a few centuries.²⁶ This rate is at least five times faster than that observed in the case of the oldest Holocene accumulation,²⁷ which occurs just about everywhere in the Mediterranean and is attributed to natural (meaning climatic) causes. During the historical periods, the rate of morphogenesis was different. This can only be explained by an overall and rapid action that was not as related to climatic fluctuations, the effects of which are always muted by the latency period of the natural environment. The change appears to be connected to the impact of large populations, which exploited the area in an artificial and systematic manner and over a large scale. Nevertheless, the climatic parameters cannot be neglected because they certainly played a role by counterbalancing or emphasizing the effects of human activities. Thus human societies must, to a greater extent than variations in the climate, be considered as one of the principal agents of the system of erosion, which constitutes a determining factor in the evolution of landscapes around the Mediterranean.

This evolution can assume various aspects, notably in relation to the speed at which it occurs. In this case, too, alluvial formations can provide some kind of answer. Their granulometry, meaning the average size of their component sediments, reveals not only the capacity of the watercourse for transporting elements of various sizes but also the type of material that is moved.

The granulometry of alluvia is often homogeneous, prevalently fine, from clay to sandy silt. These materials were derived from soil, which, on cultivated slopes, could be affected by areal erosion: diffuse rainwash and sheet erosion. The reduction in rainwater retention, linked to soil degradation, has invariably been caused by farming and induces a modification in the hydrological system of the watercourses. The irregular and increasingly violent nature of strong flows enables them to transport surplus sediments (Fig. 8). Thus what we find is the consequence of "normal" human exploitation of the area; the fine alluvial deposits resulting from this bear witness to a long-term process of exploitation, land clearance, crop growing, or grazing, with no major setbacks.

Alluvial formations are quite a different case, also dating to the historic era, since they consist mostly of rough materials (sand, gravel, and even pebbles) like those that I have identified in several places in Bithynia, notably in the Yalakdere valley (Fig. 9), the Drakon of antiquity, and in the Karasu valley.²⁸ As with the preceding deposits, the buildup proceeded according to the rhythm of spates and floods, but the calibers involved point to a far more aggressive process, a more gully-forming of erosion, that attacked the rocky masses themselves. More violent episodes were involved, which it is tempting to link with phases when the agricultural joint plots were abandoned, espe-

²⁶ R. Neboit-Guilhot, "Critères d'identification des facteurs d'orientation du sens de la morphogénèse fluviale en Italie du Sud et en Sicile," *Physio-Géo* 22/23 (1991): 62.

²⁷ J.-L. Ballais, "Vitesses d'accumulation et d'entaille des terrasses alluviales holocènes et historiques au Maghreb oriental," *Physio-Géo* 22/23 (1991): 89.

²⁸ B. Geyer, "Erosion et histoire du paysage en Bithynie médiévale," *Castrum* 5 (1999): 241–54.

cially the marginal lands which, as we know, were particularly fragile. Traditional farmlands were certainly not exempt from the risk of erosion, though to a lesser extent, due either to their position on gentler slopes or to careful management. However, unless a whole region was abandoned, these traditional territories were less affected by demographic changes (whether expansion or recessions). In contrast, marginal lands that were too steep or too small, at a distance from habitats and implanted on unfavorably exposed sites or at the limits of the easily cultivated zones (e.g., on account of altitude or aridity) are naturally more fragile, virtually unstable. The exploitation of such lands in response to demographic pressure must necessarily involve morphogenic consequences that are more difficult to control, resulting in even more catastrophic effects when the land is abandoned.

At this point, we need to recall some of the facts that may have been responsible for a significant retraction in the area under cultivation.

The great invasions and wars must certainly be taken into consideration, though opinions differ as to their consequences. Though B. Bousquet and P. Pécoux, taking the Peloponnesian War as an example, view war, probably correctly, as one of the major causes of the degradation of the natural environment and the abandonment of the countryside,²⁹ J. Lefort³⁰ and J.-M. Martin³¹ are more cautious about the demographic consequences of conflicts, at least during the Byzantine period. Indeed, there is reason to wonder whether their probable repercussions were not often limited in space and time. This does seem to have been the case in, for instance, southern Italy, where the effects of the destruction of habitats were often temporary and were felt only from the twelfth century on,³² or again, in Chalkidike where the passage of the Catalan Company at the beginning of the fourteenth century produced, at the very most, a brief demographic crisis (ca. twenty years) in some villages.³³

The plague may have played an important role. Much remains to be written about its history and results. While its ravages in the towns are well documented, the consequences of the plague for the countryside are still poorly perceived. Thus, in J. Durliat's opinion,³⁴ there is no evidence that the plague in the sixth century hit the peasant world hard, whereas, according to J. Biraben, its importance was such that it affected population levels over a long time and created conditions of insecurity and disorganization that served to aggravate the effects of subsequent epidemics. This scholar lays particular emphasis on the dramatic results of plagues when they coincided with other

²⁹ Bousquet and Pécoux, "Géomorphologie," 37. Regarding invasions and wars, see also A. E. Laiou, "The Human Resources," *EHB* 48, 58, and "Political History: An Outline," *EHB*.

³⁰ J. Lefort, "Population et peuplement en Macédoine orientale, IXe–XVe siècles," in *Hommes et richesses dans l'Empire byzantin*, 2 vols. (Paris, 1989–91), 2:75, and idem, "Tableau de la Bithynie au XIIe siècle," in *The Ottoman Emirate, 1300–1389*, ed. E. Zachariadou (Rethymnon, 1993), 109.

³¹ J.-M. Martin, "Rapport sur la communication de J. Lefort," in *Hommes et richesses dans l'Empire byzantin* (as above, note 30), 2:84.

³² *Ibid.*, 85.

³³ Lefort, "Population et peuplement en Macédoine orientale," 75.

³⁴ J. Durliat, "La peste du VIe siècle: Pour un nouvel examen des sources byzantines," in *Hommes et richesses dans l'Empire byzantin* (as above, note 30), 1:112.

catastrophes, for instance smallpox, which arrived in the West during the sixth century. Famine and war could also add their victims to those of the epidemics, in which case the death rate could exceed 20% or indeed 30% of the population as a whole.³⁵ Such a reduction in the population obviously had considerable repercussions on the density of settlements and therefore on land use. Difficult and unrewarding lands on the margins of agricultural plots were naturally the first to be abandoned; given their unstable nature, they were then exposed to erosion.

Though we do possess some data that allows us, however summarily, to trace the broad lines of landscape evolution and of land use during the Byzantine period, these tend to be disparate and are too frequently selective. Nevertheless, here too, some elements can be retained and attributed with overall significance, in spite of their inability to take account of every local variation.

The Byzantine Empire included regions that had been occupied for a very long time. The natural landscapes, for the main part inherited from the end of the Würm period, the last cold period of the Quaternary, experienced, during the middle Holocene (7500–4500 B.P.) global climatic conditions that were warmer than now,³⁶ whereas the recent Holocene period (since 4500 B.P.) probably experienced a variable climate that was generally as cold if not colder than that of the present century.³⁷ On slopes, a morphogenic evolution associated with human activity may have appeared as early as the seventh millennium,³⁸ but it is generally thought that the forest cover did not undergo any decisive changes until the Bronze Age,³⁹ within a context where the vegetation was already undergoing a selection process that favored thermophilic species over caducifoliate types.⁴⁰ Over the whole of this long evolutionary period, the final two or three millennia are of particular interest to us.

After the first half of the first millennium B.C., which was slightly colder and, possibly, rather less humid,⁴¹ the three or four centuries that preceded and followed the onset of our era were favored by a warmer and more humid climate.⁴² It was during this

³⁵ J.-N. Biraben, "La peste du VI^e siècle dans l'Empire byzantin," in *Hommes et richesses dans l'Empire byzantin* (as above, note 30), 1:123.

³⁶ From this point onward, the relative variations in temperature and humidity will be calculated in relation to the present, that is, the 20th century.

³⁷ J. Gunn, "Influences of Various Forcing Variables on Global Energy Balance during the Period of Intensive Instrumental Observation (1958–1987) and Their Implications for Paleoclimate," *Climatic Change* 19 (1991): 411.

³⁸ Bousquet and Péchoux, "Géomorphologie," 36.

³⁹ R. Treuil et al., *Les civilisations égéennes du Néolithique et de l'âge du Bronze* (Paris, 1989).

⁴⁰ R. Dalongeville and J. Renault-Miskovski, "Paysages passés et actuels de l'île de Naxos," in *Recherches dans les Cyclades*, ed. R. Dalongeville and G. Rougemont (Lyons, 1993), 54.

⁴¹ J. Neumann, "Climate of the Black Sea Region about 0 C.E.," *Climatic Change* 18 (1991): 453, refers to studies concerning the Caucasus, the north of the Sea of Azov (Soviet sources) and the Swiss Alps (Phase Göschen I). For the Alps, see also E. Le Roy Ladurie, *Histoire du climat depuis l'An Mil*, 2 vols. (Paris, 1983), 2:29.

⁴² See Neumann, "Black Sea Region," 456, for data about the central Caucasus; 457, for the south of the European Soviet Union (north of the Sea of Azov); 458, for central Anatolia (Erciyes Dag); 459, for the Crimea; and 462, for equivalent data in the Alps.

propitious period that occurred the climatic optimum of the Hellenistic and Roman eras, which were so favorable for agriculture. These conditions gradually deteriorated to give way, shortly before the middle of the first millennium A.D., to a new and colder episode, possibly as humid as the earlier period,⁴³ which persisted until around the ninth century. Thus it was in these circumstances, which, though relatively unfavorable to agriculture, cannot by themselves be said to have notably impaired its productivity,⁴⁴ that the plague arrived in the sixth century. With its heavy death toll, the plague intervened in the context of a natural environment that had been rendered fragile, on the one hand, by strong demographic growth under the late Roman Empire and, on the other, by a more marked deterioration in the climate. A phase of erosion certainly ensued, on abandoned agricultural lands at least, which were mainly situated on particularly unstable marginal land. Factors such as degradation of the soil, reducing its capacity for water retention, the climate, which was still rainy and colder, and the increased volume of matter carried by the rivers correspond to a period when water-courses must have featured alluviation and flooding. This seems to have been the case with the Pinios in Thessaly during the seventh century.⁴⁵ However, the crisis was probably short-lived: the lower demographic pressure, together with the relatively temperate climatic conditions, contributed toward some regeneration of the natural vegetation, a process that continued until about the ninth century. This was the period when the vegetation in Litochoro (western Macedonia) contained the highest proportion of tree species (85%), compared with previous and subsequent periods,⁴⁶ and when areas of brown forest soils developed in Macedonia,⁴⁷ while the rate of areal erosion of slopes that continued under cultivation slowed down.

Around the ninth century, this dynamic appears to have been reversed fairly rapidly. It was replaced by a "little climatic optimum," thought to be warmer.⁴⁸ In central and northern Greece, the period is marked by the retreat of trees and the advance of plants associated with agriculture and deforestation.⁴⁹ This was the case at Khimaditis (western Macedonia), from the middle of the ninth century,⁵⁰ at Pertouli (in Thessaly) toward

⁴³ Neumann, "Black Sea Region," 456, for the central Caucasus; 457, fig. 2, for the south of the European Soviet Union; 458, fig. 3, and 461, for the Alps (Phase Göschener II).

⁴⁴ M. Morineau, cited in Biraben, "La peste du VI^e siècle," 123 n. 1. In studying the production of agricultural establishments in France during the 16th–18th centuries, he has shown that productivity per hectare scarcely varied as a consequence of the Little Ice Age.

⁴⁵ R. Caputo, J.-P. Bravard, and B. Helly, "The Pliocene-Quaternary Tecto-sedimentary Evolution of the Larissa Plain (Eastern Thessaly, Greece)," *Geodinamica Acta* 7.4 (1994): 229.

⁴⁶ N. Athanasiades, "Zur Postglazialen Vegetationsentwicklung von Litochoro Katerinis und Pertouli Trikalon (Griechenland)," *Flora* 164 (1975): 123.

⁴⁷ L. Faugères, "Recherches géomorphologiques en Grèce septentrionale (Macédoine centrale et occidentale)," 2 vols. (thèse d'État, Université de Paris IV, 1978), 174, table II.

⁴⁸ Gunn, "Forcing Variables," 394, and Le Roy Ladurie, *Histoire du climat*, 40. This phase is characterized in the Alps by retreating glaciers, and is thought to have begun ca. 750, ending ca. 1200–1230.

⁴⁹ Bellier et al., *Paysages de Macédoine*, 104, and A. Dunn, "The Exploitation and Control of Woodland and Scrubland in the Byzantine World," *BMGS* 16 (1992): 244.

⁵⁰ J. Turner, "The Vegetation of Greece during Prehistoric Times: The Palynological Evidence," in *Thera and the Aegean World*, ed. C. Doumas, vol. 1 (London, 1978), 769. The carbon 14 dating of the

its end,⁵¹ and at Litochoro, toward the middle of the tenth century.⁵² The phenomenon can certainly be related to the one that occurred during the Roman optimum. The period from the tenth to the thirteenth century does in fact appear to have featured strong demographic growth and an extension of cultivation, both of which are well attested in eastern Macedonia,⁵³ where they were accompanied by an increased number of hamlets, as was also the case in the West.⁵⁴ The end effect was to subject the environment to strong demographic pressure at the very time when, between ca. 1200 and 1300–1350, a new glacial thrust was developing in the Alps, evidence of a relative return to a cold climate.⁵⁵

In the fourteenth century, palynological diagrams show, for Greece too, a reversal of the earlier trend, marked by an expansion of arboreal formations and a denser plant cover.⁵⁶ Everything seems to point to a repetition of the crisis in the sixth century. The plague epidemic of the mid-fourteenth century, with its numerous recurrences, affected a large population that had been farming an extensive surface of lands, rendered fragile as a result of both demographic pressure and a very probable fluctuation in the climate. This combination of circumstances contributed to intensify the erosion. A new morphogenic crisis, which was probably brief and violent this time too, was triggered by the fall in population and the ensuing retraction of cultivated areas. Some stratigraphical sections bear witness to this process, as perhaps in the case of the ravine of Serbia (Macedonia) where L. Faugères and J. Lefort have observed an alluvial formation, dated by pottery finds to the fourteenth and fifteenth centuries. Another formation beneath the Byzantine bridge of Çakırca (Bithynia, near Iznik) can only have been caused by a phenomenon of this kind.⁵⁷ From the sixteenth century on, the effects of the “Little Ice Age” were increasingly felt. A reduction in the population pressure allowed the vegetation to regenerate to some extent, resulting in an improved plant cover. However, in terms of breadth and duration, these changes were not sufficient to restore the soil and the true forest in the most degraded sectors.

Thus the evolution of the landscape during the Byzantine period appears to have been determined by two sets of facts. (1) The various natural environments are intrinsically fragile. The more so in that they are subjected to a harsh and above all irregular

three examples shown here was established earlier and has not been recalibrated according to the new tables. Therefore it cannot be considered very precise, and simply serves to indicate a probable period (9th–10th centuries) when the vegetation had already begun to register changes.

⁵¹ Athanasiades, “Postglazialen Vegetationsentwicklung,” 112.

⁵² Ibid., 123.

⁵³ Lefort, “Population et peuplement,” 69–75.

⁵⁴ Martin, “Communication de J. Lefort,” 87–88.

⁵⁵ Le Roy Ladurie, *Histoire du climat*, 29.

⁵⁶ S. Bottema, “Palynological Investigations in Greece with Special Reference to Pollen as an Indicator of Human Activity,” *Palaeohistoria* 24 (1982): 281, and Athanasiades, “Postglazialen Vegetationsentwicklung,” 127.

⁵⁷ Carbon 14 dating of wood charcoal from LA CNRS no. 11, Université Claude Bernard-Lyon 1, Laboratory code Ly-5142. The date in actual years following dendrochronological correction is A.D. 1451 to 1642 (carbon 14 age: 345 ± 50 B.P.) with respect to the center section of a formation with an extremely coarse base (publication forthcoming).

climate. Climatic accidents happen frequently, the consequence of excesses inherent to the Mediterranean world. It is these (rather than the oscillations, which are always limited in breadth) that generally cause the remarkable events mentioned in textual sources. (2) Man sets his mark in a continuous fashion (albeit irregularly) on landscapes to whose remodeling he makes a profound contribution. His is a primordial activity whose effects generally prove irreversible.

Though man is principally responsible for an evolution that is generally disastrous because it affects fragile environments, the dramatic nature of the evolution becomes evident only when various constraints combine, contributing to (and sometimes subtracting from) processes that, on their own, would have had a lesser impact. In this connection, the effects of the plagues, together with those of a large population and small climatic fluctuations, seem to have had catastrophic repercussions. This observation must of course be adjusted with regard to the different regions of the empire. The distance of particular areas from large centers and axial roads at the time of the epidemics, together with variations in emphasis of regional climates and the proportion of slopes in the topography produced certain evolutions. The history of the landscapes of Byzantium cannot be reduced to the few broad outlines sketched above, often on a hypothetical basis. This history has yet to be written for each of the empire's constituent regions.

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The Human Resources

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In the Byzantine Empire, as in all preindustrial societies, perhaps the single most important economic resource was manpower. Land without labor was useless, as contemporaries fully realized.¹ A recognition of this fact may underlie the willingness of some people, most notably Plethon, to consider land a common resource, not to be bought or sold, and becoming valuable only through the labor invested in it.² In the chapters that follow, it will be seen that, given the slow advances of technology, demography is of primary importance in the development of the countryside, production being a function of the increase or decrease in population.³

Given this overriding importance of the human factor, it is particularly unfortunate that it is not possible to estimate with any degree of accuracy the population of the empire at any point in its history, at least after the sixth century. Efforts have, of course, been made, but the figures that have been proposed vary widely.⁴ In 1949, E. Stein gave the figures 30 million in the reign of Justinian, 20 million in the first half of the eleventh century, 10–12 million under the Komnenoi, and 5 million during the reign of Michael VIII, without discussing the basis for these figures.⁵ The figures most frequently cited are those of J. C. Russell, who proposes, for the eastern Roman and Byzantine Empire, a population of ca. 24 million in 350, 21 million in 600, 10 million in 800, 13 million in the year 1000, and 7 million in the year 1200.⁶ They are, unfortunately, based on untestable assumptions, such as the proportion of the population of

¹ See the statement of Constantine Limpidaris to Charles of Valois in 1308: A. E. Laiou, *Constantinople and the Latins: The Foreign Policy of Andronicus II, 1282–1328* (Cambridge, Mass., 1972), 343.

² See A. E. Laiou, "Economic Thought and Ideology," *EBH* 1119.

³ Cf. J. Lefort, "The Rural Economy, Seventh–Twelfth Centuries," *EBH* 261ff, and A. E. Laiou, "The Agrarian Economy, Thirteenth–Fifteenth Centuries," *EBH* 306ff.

⁴ For a discussion of older efforts, and a critique of the results, see P. Charanis, "Observations on the Demography of the Byzantine Empire," in *Studies on the Demography of the Byzantine Empire* (London, 1972), art. 1.

⁵ E. Stein, "Introduction à l'histoire et aux institutions byzantines," *Traditio* 7 (1949), 154.

⁶ J. C. Russell, *Late Ancient and Medieval Population* (Philadelphia, 1958), 148, 99. For Asia Minor he gives the following figures: 350, 11.6 million; 600, 7 million; 800, 8 million; 1000, 8 million; 1200, 7 million. For Greece and the Balkans: 350, 2 million plus 3 million; 600, 1.2 million plus 1.8 million; 800, 2 million plus 3 million; 1000, 5 million; 1200, 4 million. It must be remembered, however, that these figures apply to geographic areas, regardless of whether they were under Byzantine control. I

the principal city of a region to the total population of the region (1.5%), the size of particular cities, which is uncertain in itself, and a household coefficient of 3.5. His estimate of city populations tends to be low, and the household coefficient cannot be assumed for the entire period; a mean population coefficient of approximately 5 is attested in early fourteenth-century Macedonia, before demographic decline had set in.⁷ W. Treadgold has quite sensibly used the Turkish agricultural census of 1950 for Asia Minor and concluded that the 2,527,800 rural households it comprised is comparable to the ninth-century population, estimating about 10 million for the 840s.⁸ In a more recent work, the same author, using and adapting the figures given by C. McEvedy and R. Jones,⁹ has produced the following population estimates: 540s: 19 million for the eastern provinces, 26 million for the entire empire; reign of Phokas: 17 million; 780s: 7 million; 1025, 12 million; 1143, ca. 10 million; 1204, ca. 9 million; 1281, ca. 5 million.¹⁰ He provides no justification for most of the figures.

None of these estimates are more than educated guesses, and there are virtually insuperable difficulties in reaching any solid estimate. Indeed, most modern historians, including A. Harvey, J. Lefort, M. Hendy, and M. Kaplan, have prudently refrained from proposing any global population estimates. This is certainly the wisest course of action. I will, nevertheless, attempt here another estimate. Before undertaking this effort, some further comments are necessary on Russell's figures, which are widely quoted because they were the only recent and reasoned estimates we possessed. First of all, they seem too low for certain periods, and, second, the evolution they suggest does not conform with the population trends that most historians accept these days. As to the first point, even if the number of households he proposes were to be correct, his global household coefficient goes against the only halfway solid evidence we have. Furthermore, as has already been stated, the basis for the estimate of population is very insecure.

The second point regarding Russell's figures has to do with demographic evolution. It is, today, widely believed that the population began an upward trend after the end of the period of plagues, conventionally set at 747 for the Byzantine Empire, the date of the last serious outbreak of the plague (although others are also attested) before the mid-fourteenth century. The increase suggested by Russell between the years 800 and 1000 seems to reflect the increase of territory rather than that of a secular population rise. Yet such a rise is posited by most modern historians. Its beginning would be at some point in the ninth century, while the curve itself is, to some extent, the subject of

have adjusted them in my text to take account of the fact that, for example, most of the Balkans were not in Byzantine hands in 800, and part of Asia Minor was Turkish in 1200.

⁷ For the critique, see Charanis, "Demography," 3, 5, and n. 2. For Macedonia, see A. E. Laiou-Thomadakis, *Peasant Society in the Late Byzantine Empire: A Social and Demographic Study* (Princeton, N.J., 1977), table vi-1.

⁸ W. T. Treadgold, *The Byzantine State Finances in the Eighth and Ninth Centuries* (New York, 1982), 54–55.

⁹ C. McEvedy and R. Jones, *Atlas of World Population History* (Harmondsworth, 1978).

¹⁰ W. T. Treadgold, *A History of the Byzantine State and Society* (Stanford, Calif., 1997), *passim*.

discussion. For some scholars, there is a constant demographic increase either until the time of the outbreak of the Black Death in the 1340s or until the very early fourteenth century.¹¹ Others postulate a demographic growth from some time in the ninth century, becoming generalized in the twelfth century and continuing into the thirteenth.¹² Nicholas Svoronos' idea that there was demographic stagnation beginning in the late eleventh century has not found many followers.¹³ Thus, independently of the geographic expansion or contraction of the empire, most scholars agree that there is an upward demographic trend from the ninth century certainly through the twelfth, and most probably through the thirteenth, down to the beginning or the middle of the fourteenth century.¹⁴ After that, there is virtually unrelieved population decline until the end of the empire or a few decades before. The absolute numbers of the population of the empire, of course, were very much affected by its geographic frontiers. It is also undoubted that specific areas would be affected by political/military problems, since prolonged warfare had adverse effects on both the productive capacity of the areas so afflicted and the stability of the population.

To a considerable extent the demographic development of the empire was influenced by the long-term and short-term effects of the plague epidemic or pandemic that began in 541/542. These have sometimes been disputed, since it has been argued that its impact has been exaggerated.¹⁵ The burden of the evidence, however, suggests that the plague of 541–542 was, indeed, catastrophic. It seems to have struck not only the cities, with Constantinople losing at least 40% of its inhabitants, but also the countryside.¹⁶ It is arguable that its effects were diversified, with the interior of Asia Minor and the Balkans less afflicted than the coasts; the interior of Syria, on the other hand, seems to have suffered considerably.¹⁷ In any case, the plague attacked the populations of both city and countryside, and since it traveled along the routes of trade and communications, along the coasts and the *cursus publicus*, its effects may well have been greatest

¹¹ On this, cf. J. Lefort, "Population et peuplement en Macédoine orientale, IXe–XVe siècle," in *Hommes et richesses dans l'Empire byzantin*, 2 vols. (Paris, 1989–91), 2:69–71; Lefort, "Rural Economy," and Laiou, "Agrarian Economy."

¹² A. Harvey, *Economic Expansion in the Byzantine Empire, 900–1200* (Cambridge, 1989), 47ff.

¹³ N. Svoronos, "Remarques sur les structures économiques de l'Empire byzantin au XIe siècle," *TM* 6 (1976): 62–63.

¹⁴ J. Lefort, "Tableau de la Bithynie au XIIIe siècle," in *The Ottoman Emirate*, ed. E. Zachariadou (Rethymnon, 1993), 103.

¹⁵ J. Durliat, "La peste du VIe siècle: Pour un nouvel examen des sources byzantines," in *Hommes et richesses* (as above, note 11), 1:106–19. For further bibliography, see Lefort, "Rural Economy," 262 n. 259.

¹⁶ J.-N. Biraben, "La peste du VIe siècle dans l'Empire byzantin," in *Hommes et richesses* (as above, note 11), 1:121–25; E. Patlagean, *Pauvreté économique et pauvreté sociale à Byzance, 4e–7e siècles* (Paris, 1977), 85ff; M. Kaplan, *Les hommes et la terre à Byzance du VIe au XIe siècle: Propriété et exploitation du sol* (Paris, 1992), 458ff. Cf. in *EHB*: B. Geyer, "Physical Factors in the Evolution of the Landscape and Land Use," C. Morrisson and J.-P. Sodini, "The Sixth-Century Economy," Lefort, "Rural Economy," and G. Dagron, "The Urban Economy, Seventh–Twelfth Centuries."

¹⁷ L. I. Conrad, "Epidemic Disease in Central Syria in the Late Sixth Century: Some New Insights from the Verse of Hassan Ibn Thabit," *BMGS* 18 (1994): 12–58; idem, "Die Pest und ihr soziales Umfeld im Nahen Osten des frühen Mittelalters," *Der Islam* 73 (1996): 81–112.

among the most economically productive segments of the population. Such was the loss of manpower that, apparently, both artisans and men who worked the land demanded wages two or three times higher than in pre-plague times.¹⁸ The periodic recurrence of the plague until 747, although each instance was less powerful than the first outbreak, kept the population in check. The indices of the beginnings of a population expansion start shortly after the end of the period of plague outbreaks, in the ninth century.¹⁹ This is also, of course, the period when the political fortunes of the empire improved considerably, which meant both the slow reestablishment of peace and increase in territory. The second large outbreak of the plague, in the late 1340s with recurrences over a hundred years, exacerbated a demographic and economic crisis already in existence.²⁰

The proportion of the rural to the urban population is also not possible to establish with any numerical accuracy given the state of our knowledge, since we would be dealing with two unknowns: the size of cities and towns, and the size of the rural population. What may be stated with certainty is that the proportion of the urban population was much lower in the seventh, eighth, and ninth centuries than in the subsequent period; the urban population may have reached its height in the twelfth century, but was certainly also high in the Palaiologan period.

I should like to hazard another estimate of the overall population of the Byzantine Empire, based on population density, itself a matter of educated guess. I have suggested elsewhere that the density of the rural population in early fourteenth-century Macedonia was 34 people per km², as against 57.4 people in the Greek census of 1961.²¹ For the population of the Peloponnese, V. Panayiotopoulos, on the basis of the 50,941 families of the Turkish census of 1530–1540, estimates around 200,000 people for Ottoman Peloponnese (with a household coefficient of 4, since he argues that the household structure was different in the Peloponnese and in Macedonia), that is, a density of 9 people per km².²² Of course, the situation in the middle of the sixteenth century is not comparable to that of the Byzantine period, given the demographic upheavals attendant upon the Ottoman conquest and the population policies of the Ottoman state. The Greek census of 1940 shows in the Peloponnese a population density of 55.6 people per km² (for a population of 1,169,559), while that of 1829, after years of destructive war, shows a population density of 16 people per km², with a total of 336,366.²³

Let us take as a base the reign of Basil II in the year 1025, the time when the medieval

¹⁸ Kaplan, *Les hommes et la terre*, 461, with reference to Novel 122 of Justinian I (544).

¹⁹ Lefort, "Rural Economy," 261ff.

²⁰ Laiou, "Agrarian Economy," 309–11.

²¹ Laiou-Thomadakis, *Peasant Society*, 42–43. The statistics for 1961 are from the Στατιστική Έπετηρίς της Ελλάδος (Athens, 1970). I also warned against extrapolations about the total size of the rural population. As an indication of how soft our estimates are, one might look at N. K. Kondov, "Za broja na naselenieto v B'lgarija k'm kraja na XIV v.," *Istoricheski Pregled* (1968), 66–69, who gives the density of the Macedonian population in the 14th century as 15 people per km².

²² V. Panayiotopoulos, Πληθυσμός και οικισμοί της Πελοποννήσου, 1305–1805 αιώνας (Athens, 1985), passim, and esp. pp. 118ff, 170.

²³ Ibid., table 20, p. 173.

empire reached its geographic, although not its demographic, height. Let us, further, use half my estimate of the rural population of Macedonia, that is, 17 people per km²,²⁴ and apply it to Thrace, Macedonia, Bulgaria, and Asia Minor.²⁵ Let us apply the low density of 9 people per km² that we found in the Peloponnese in 1530–40 to the rest of the empire.²⁶ The population would doubtless be more dense in agricultural areas.²⁷ This gives us a population estimate of ca. 18 million, to which must be added about 200,000 for Constantinople and an unknown figure for other cities, for a total not far from 19 million people. This is higher than most other estimates, except that of Stein, but does not seem unlikely. In the late eleventh and twelfth centuries there was considerable loss of territory in Asia Minor, but the fertile and populous coastal territories and their hinterlands remained in Byzantine hands. Furthermore, there was continuing population increase and urbanization, with an increase in both the number and size of cities. Constantinople reached a population of 300,000 to 400,000 in the late twelfth century; Thessalonike may have reached 150,000, a number of other cities ranged from 10,000 to 30,000, and others upward of 30,000. Corinth has been estimated as having a population of 15,000–20,000, and Monemvasia one of 20,000.²⁸ Thus it is not unlikely that in the late twelfth century, that is, in the 1170s, and thus before the secessions of the last part of the century, the population was similar to that of 1025.

Along with the difficulty of establishing a total population for the empire, we lack other secure demographic information, such as the age structure of the population. Indications exist for periods that are very far apart from each other: the mid-fifth to the seventh century, on the one hand,²⁹ and the fourteenth century on the other.³⁰ Information for the most important period, the eighth through the thirteenth century, is lacking. Furthermore, the data from the two periods for which there is documentation are not comparable, nor have they been analyzed in comparable ways. The most that can be said is that, generally speaking, the population was a young one, that is, life expectancy at birth was low. The data from the earlier period show that 42% of the men

²⁴ I have used this figure primarily because we are some way away from the demographic high point, and therefore should allow for the differential due to the point in the demographic curve. I am also taking into account the fact that some areas were less densely populated than others.

²⁵ That is, roughly speaking, the surface of modern Turkey and Bulgaria, and Greek Thrace and Macedonia, or a total of ca. 909,000 km². For comparison, see B. Geyer, Y. Koć, and J. Lefort, "Le peuplement et l'occupation du sol au début de l'époque moderne" in press, who estimate that Bithynia had, in 1573/74, a population of 20 people per km², or 15 if one excludes Bursa. The estimate is predicated upon a household coefficient of four, which the authors consider a minimum. I am grateful to J. Lefort for allowing me to see a copy of this study in manuscript.

²⁶ This is a surface of ca. 339 km², not including southern Italy.

²⁷ Cf. J. Lefort, "Population et démographie," in press. I am grateful to the author for allowing me to see this study in manuscript.

²⁸ For Constantinople, see in *EHB*: P. Magdalino, "Medieval Constantinople: Built Environment and Urban Development"; for Corinth, G. D. R. Sanders, "Corinth"; for Monemvasia, H. Kalligas, "Monemvasia, Seventh–Fifteenth Centuries." For Thessalonike and other cities, see Treadgold, *History*, 702.

²⁹ Durliat, "La peste," 109; Patlagean, *Pauvreté*, 95ff.

³⁰ Laiou-Thomadakis, *Peasant Society*, chap. 7.

and 49% of the women were between fifteen and thirty-four years old at the time of death, but this analysis does not count children before the age of fifteen, when mortality is heaviest. For the early fourteenth century, I have supposed a life expectancy *at birth* of 22.5 years for females and 22.295 years for males. For those who survived their first year, life expectancy rises to 33 years, and after five years the life expectancy becomes 47.5 years. This estimate may, in fact, be too pessimistic. It bears repeating that it is not possible to compare the data from the early and the late period, and thus any effort to trace differences in the life expectancy must fail. The point remains clear that in both periods the life expectancy *at birth* was low, although the life span did not differ significantly from that of the mid-twentieth century. In the later period, life expectancy increases significantly for those who survive the first few hazardous years.

It has been said that Byzantine men of letters in the late eleventh and twelfth centuries died at the high average age of seventy-one, which compares favorably with the figures for similar groups in the fourth century, the sixth century, and in western Europe of the late eleventh and twelfth centuries.³¹ However, no general conclusions may be drawn from this observation, for two reasons. First, what these figures show is not “an unexpectedly long life expectancy,” for they do not represent life expectancy at birth, but rather the average life span of a preselected group, membership in which necessarily presupposes survival past the most dangerous years. Second, the sample is much too small to have any statistical significance. Conclusions drawn from saints’ lives are equally unenlightening, for it was easier to become a saint at an older rather than a younger age. Individuals certainly could and did reach the age of sixty-five, seventy, or even older, but the majority of the population did not.

It is also possible that life expectancy was higher during the periods of economic expansion, that is, in the tenth through the twelfth centuries; but no trustworthy information exists.

Two important factors that affected life expectancy and the size of population were diet and disease. We are better informed for the former than for the latter. The diet of the Byzantines comprised the elements usual in a medieval diet in the Mediterranean regions: grains, pulses, olive oil, wine, dairy products, fish and meat, fresh vegetables, and fruit.³² Honey provided the sweetener; fowl provided both meat and eggs. Butter substituted for olive oil in areas where the olive tree could not be cultivated, that is, in areas where the climate is cold, which in practice means the inland regions.³³ The staple diet may, perhaps, be surmised from the products mentioned in *adelphata*, the annuities purchased from monasteries by some people in the late Byzantine period,

³¹ A. Kazhdan, “Two Notes on Byzantine Demography of the Eleventh and Twelfth Centuries,” *ByzF* 8 (1982): 117. The number of people involved is 15, 27, 13, and more than 100, respectively. Only the large figure can be significant (average age at death = 63 years).

³² For details of the diet of the inhabitants of Constantinople, see Dagron, “Urban Economy,” 437ff; for the various kinds of grain and pulses cultivated, see *ibid.*; Lefort, “Rural Economy,” 244ff, and Laiou, “Agrarian Economy,” 313ff.

³³ Cf. Laiou-Thomadakis, *Peasant Society*, 26–28.

and which were paid in kind. The recurring foodstuffs are grain, wine, olive oil or butter, legumes, and cheese, to which might be added walnuts, olives, and salt.³⁴ This accords well with the rations given to the patients of the hospital of the monastery of Pantokrator in the twelfth century.³⁵ For obvious reasons, none of these sources mentions meat. Meat consumption, however, seems to have been not inconsiderable. It has been argued that there is a very steep decline in the quantity of bread consumed in twelfth-century Byzantium (1.5 pounds per person per day) compared to that of the late Roman period (3–6 pounds) and that the difference was made up by a considerable increase in meat consumption. Both written sources and archaeological sources from Bulgaria point up the importance of cattle breeding, flocks of sheep and goats, and herds of pigs. The evidence from Constantinople confirms that meat was an important part of the diet.³⁶ Undoubtedly, cattle provided a much smaller portion of the meat consumption than did sheep and goats or, indeed, pigs, although a late seventh-century text which says that Jews do not eat pork because the pig gives only meat, while other animals also produce dairy products and wool may suggest that the pig was not prized as much as other animals.³⁷ Meat has been described as a famine reserve,³⁸ since cattle consume grain and “store” it, to be consumed in times of grain shortage. In Byzantium, it seems that the consumption of meat was more considerable than would be the case if it functioned mostly as famine reserves. Meat consumption would undoubtedly have varied with the general economic conditions: the strongest argument for high meat consumption outside Constantinople has been made for the eleventh to twelfth centuries.

In terms of the foodstuffs consumed, the Byzantine diet was probably well balanced. Pulses provided vegetable protein; wine provided calories. There was a considerable variety of fruits and vegetables, as one can see from sources from most periods: apples, nuts, figs, pears, melons, pomegranates, raisins, olives, spinach, endives, carrots, cabbages, leeks, carrots, beetroot, radishes, turnips, onions, garlic, cucumbers, lettuce, pumpkins.³⁹ Honey was an important supplement, and a twelfth-century source states that apiculture was more developed than in northern France.⁴⁰ If potentially the Byzantine diet was quite adequate, the question arises whether the quantities were such as to keep the population in good health. The answer must be a qualified yes. It is

³⁴ See, for example, A. Guillou, *Les archives de Saint-Jean-Prodrôme sur le mont Ménéciée* (Paris, 1955), no. 34 (1339); *Actes d'Esphigménou*, ed. J. Lefort (Paris, 1973), no. 29 (1388).

³⁵ Dagron, “Urban Economy,” 440–41 and n. 324.

³⁶ Kazhdan, “Two Notes,” 115–22; for Constantinople, see Dagron, “Urban Economy,” 438–39.

³⁷ Anastasius Sinaita, PG 89:1273; for the date (ca. 690), see B. Flusin, “Démon et sarrasins: L’auteur et le propos des *Diègèmata stèrìktika* d’Anastase le Sinaïte,” *TM* 11 (1991): 390–93, 409.

³⁸ M. Jameson, “Famine in the Greek World,” in *Trade and Famine in Classical Antiquity*, ed. P. Garnsey and C. R. Whittaker (Cambridge, 1983), 9–10.

³⁹ J. Koder, “Fresh Vegetables for the Capital,” in *Constantinople and Its Hinterland*, ed. C. Mango and G. Dagron (Aldershot, 1995), 49–56; *Actes d'Iviron*, ed. J. Lefort, N. Oikonomidès, and D. Papa-chryssanthou, 4 vols. (Paris, 1970–82), 4: no. 97 (1421); P. Schreiner, “Die Produkte der byzantinischen Landwirtschaft nach den Quellen des 13.–15. Jh.,” *BHR* 10 (1982): 88–95.

⁴⁰ Kazhdan, “Two Notes,” 121.

argued below that the average peasant household produced enough to be more than self-sufficient, and that the wages of urban laborers, assuming that they were employed throughout the year, which was not necessarily the case, were sufficient to maintain life.⁴¹ In the periods of economic expansion, and at normal times, it may be that the diet of the Byzantines was, indeed, better than that of western Europeans.⁴² It must always be borne in mind, however, that diet changed according to the general economic circumstances, and that therefore production and the alimentary well-being of the population were dialectically related.

It must also be kept in mind that even during periods of economic expansion, there were places and times when the population was afflicted by hunger. In the areas that belonged to the Byzantine Empire, there is very considerable annual variation in wheat yields, and it has been suggested that in many parts of modern Greece two out of seventeen years give very poor wheat crops.⁴³ Successive crop failures could tax this fragile system rather heavily. Wars and sieges could easily create near-famine situations, not only in the period of endemic invasions or warfare but even, sporadically, in times of relative security. Given the coincidence of the agrarian calendar and the calendar of warfare, and the ancient practice of burning the crops and destroying the productive resources of the enemy, this is no wonder.⁴⁴ A curious text of the late eleventh to twelfth centuries, which its editor has called a tragi-legal poem, relates the tragic story of a woman from the Kibyrrhaiotai theme, who had not only eaten unclean meats, including snakes, but had also killed and eaten her own child. Whatever the truth of the story, the poignant answer of the heroine to the judge who asked her if she had accomplices encapsulates the factors that could bring about terrible famine: her accomplices, she said, were "Heavy Winter and exceedingly severe Famine," at a time when her province was under the "barbarian knife," that is, during the Seljuk invasions.⁴⁵ On the other hand, it has to be noted that events with globally catastrophic effects, such as the severe winter and famine of 928, were rare in Byzantium, especially in the tenth century and through the twelfth. Although severe shortages are attested in the first half of the eleventh century, no significant famines are mentioned in the twelfth century, a tribute to the system of production and distribution.⁴⁶ After the recovery of Constantinople by the Byzantines in 1261, shortages of food, sometimes very

⁴¹ Lefort, "Rural Economy," 293ff; C. Morrisson and J.-C. Cheynet, "Prices and Wages in the Byzantine World," *EHB* 856–57.

⁴² Kazhdan, "Two Notes," 121; for the diet of western Europeans in the early medieval period, see K. L. Pearson, "Nutrition and the Early-Medieval Diet," *Speculum* 72 (1997): 1–32.

⁴³ K. Hopkins, "Models, Ships and Staples," in Garnsey and Whittaker, *Trade and Famine* (as above, note 38), 91; D. Rathbone, "The Grain Trade and Grain Shortages in the Hellenistic East," in *ibid.*, 46.

⁴⁴ A. E. Laiou, "War, Peace and Economic Development in the Medieval Balkans," in *South East Europe in History: The Past, the Present, and the Problems of Balkanology* (Ankara, 1999), 67–77.

⁴⁵ R. Macrides, "Poetic Justice in the Patriarchate: Murder and Cannibalism in the Provinces," *Cupido Legum* (Frankfurt, 1985), 144–45: "Ἐσχον συνεργοὺς ἀφορήτους τῇ βίᾳ· ἔσχον συνεργοὺς οὓς λέγεις βροτοφθόρους . . . / χεიმὼν ἐπαχθῆς καὶ λιμὸς βαρὺς σφόδρα.

⁴⁶ Lefort, "Rural Economy," 263.

severe indeed, reappear frequently; they are mostly connected to wars, invasions, and sieges.

About illness, and the health of the population, we are very poorly informed, less because of an absence of sources and more because the topic has not yet been the subject of sufficient research. Evelyne Patlagean has given a typology of illnesses that affected the population of the early period (4th–7th centuries), on the basis of healing miracles attested in saints' lives. She is, of course, aware of the problems inherent in such sources; for example, illnesses like malaria, and possibly tuberculosis, appear only rarely, since people perhaps did not consider them as specific illnesses, while other problems, such as paralysis or demonic possession, having a good scriptural pedigree, appear with alarming frequency.⁴⁷ Blindness, deafness and mutism, dropsy, intestinal problems, ulcers, muscular problems including paralysis, possibly leprosy, and mental disorders are all mentioned in these sources. Some of the illnesses that do appear she thinks may have been due to malnutrition: blindness to an absence of vitamin A, muscular troubles to insufficient vitamins A and B. The miracles of saints in the ninth to tenth centuries, studied by Alice-Mary Talbot on the basis of the saints' lives included in the hagiographic database at Dumbarton Oaks, and the miracles of the saints of the fourteenth century, mention similar illnesses. Urinary problems, hemorrhage, menstrual problems and problems with lactation in the case of women, paralysis, mental problems (possession), blindness, dropsy, fever, abscesses, cancerous lesions, variants of leprosy, dumbness and deafness, hernia, epilepsy, and problems with the joints are all mentioned.⁴⁸ Given the nature of the sources, an analysis of the frequency of the incidence of such diseases in the texts has no hope of corresponding to their incidence in reality; it is not possible, for instance, that demonic possession was thirty or forty times more common than sterility or complications from childbirth. Nor is the omission of illnesses such as rickets to be taken as an indication that the disease did not afflict the population. In brief, any serious discussion of the health of the population, especially in its relationship to nutrition and to the productive capacity of the population, must await a systematic study of illnesses, in which the examination of written sources, especially epistolography, must go hand in hand with the discoveries of archaeology.

⁴⁷ Patlagean, *Pauvreté*, 101ff.

⁴⁸ A.-M. Talbot, *Faith Healing in Late Byzantium: The Posthumous Miracles of the Patriarch Athanasios I of Constantinople by Theoktistos the Stoudite* (Brookline, Mass., 1983), 16–18. I thank A.-M. Talbot for having shown me her unpublished list of diseases from the saints' lives of the ninth-tenth centuries.

Land and Sea Communications, Fourth–Fifteenth Centuries

Anna Avramea

The principle that the active and coordinated collaboration of nature and man is an essential requirement for the creation of a network of communications is of fundamental importance. Furthermore, when the objective is the construction of roads, people usually revert to the alignments and routes of the past. The Byzantines inherited and used the well-organized system of Roman roads dating from earlier times, adapting it to the requirements of their own period. They also lived, fought, and traded at sea—a natural extension of the land and an element of cohesion in the empire. In the days of its greatest glory, the Byzantine Empire unified and administered vast tracts of land linked by sea. Constantinople, in its geographic position, was a further expression of this duality of land and sea.¹ The city stood close to the strategically vital axis that linked Europe and Asia—the valley of the Danube with that of the Euphrates—and at the point where that major diagonal land route intersected with the Mediterranean/Black Sea marine axis. Its position was thus decisive for the directions and routes of communications by road and water. Whoever was master of Thrace and the roads that led to the capital could control the flow of supplies to it overland, but in order to starve the city into surrender one would also have to control communications by sea.²

Over the centuries-long history of the empire, great variety can be seen in the structure of roads, and this flexibility involved adaptation to both the terrain and local techniques. Certain sections of road arteries or sea routes can be observed falling into disuse or being revived; such phenomena can be interpreted in connection with the shrinkage, disappearance, or development of the urban centers linked by the routes in question. Land and sea routes to secure communications are, therefore, among the most variable and complex components in our picture of the empire: they alter, are

This chapter was translated by John Solman.

¹ Prokopios, *Buildings*, 1.5.13, in *Procopii Caesariensis Opera omnia*, ed. J. Haury and G. Wirth, 4 vols. (Leipzig, 1962–64), 4:29: ὥστε ἀμέλει ὀρμιζομένης ἐνταῦθα νηὶς ἢ μὲν πρύμνα τῇ θαλάσσῃ ἐπῆρται, ἢ δὲ πρῶρα ἐν τῇ γῇ κάθεται.

² J. Durliat, “L’approvisionnement de Constantinople,” in *Constantinople and Its Hinterland*, ed. C. Mango and G. Dagron (London, 1995), 26.

abandoned, or come back into use following the ebb and flow of political and military events, of economic conditions, in a word, of history. In most cases, however, we should not expect to find major changes in the alignment of the main roads and important sea routes. These remain stable and resistant to change, a constancy that is a feature of areas with a dense road network. Changes can be identified more frequently in connection with the functioning of the urban centers than with the alignment of land and sea routes.

Land Communications: Organization, Changes, Itineraries, Road Maps

In the case of properly organized roads, constructed by the state, the decisions of the authorities, dictated by changing times, altered the infrastructure and the directions taken. The construction and surfacing of roads and bridges, the erection of signs, and the setting up of stations where travelers could obtain fresh animals, spend the night, eat, bathe, and often engage in trade were the principal features of the organization and infrastructure of road communications. These were the properly organized roads that travelers had to use for their convenience and safety.³ Where military purposes were concerned, too, it was essential that the state of the road along which the troops were to march be known; as Constantine VII Porphyrogennetos put it, it was necessary to know “which road is narrow and steep and dangerous, and which is easy to travel along.”⁴ Saints, on the other hand, often turned aside from the usual way in search of quiet, taking roads that were “untrodden and lonely.”⁵ Apart from the road network that linked the various areas (isolated or otherwise), there is also the question of city streets and the role of the institutional forces (bishops, or citizens discharging their duties to the community) as they acted within the framework of the urban functions of the early Byzantine period.⁶

Our knowledge of the organization and functioning of the communications service and the imperial post (the *cursus publicus* or *demosios dromos*) comes from imperial legislation. The service was divided into the *cursus clabularis* (*platys dromos*), which dealt with the movements of tax in kind (the *annona*), weapons and military clothing, soldiers’ families, and bishops on their way to ecumenical synods, and the *cursus velox* (*oxys*

³ Life of St. Stephen the Younger, PG 100:1096–97: Καὶ ὡς αὐθις οἱ τὰς ἐν ἡπείρῳ διατριβὰς ἀσπαζόμενοι . . . οὐ ταῖς ἀγνοουμέναις ἀτραποῖς σφᾶς αὐτοὺς ἐμπιστεύουσι, τὸν ἀπὸ τῆς πλάνης δεδιότες φόβον καὶ τῶν λητῶν τοὺς λόχους ἀγωνιώντες, ἀλλὰ ταῖς λεωφόροις κεχρημένοι σὺν ἀσφαλείᾳ πολλῇ (M.-Fr. Auzéry, *La Vie d’Etienne le Jeune* [Aldershot, 1997], 109).

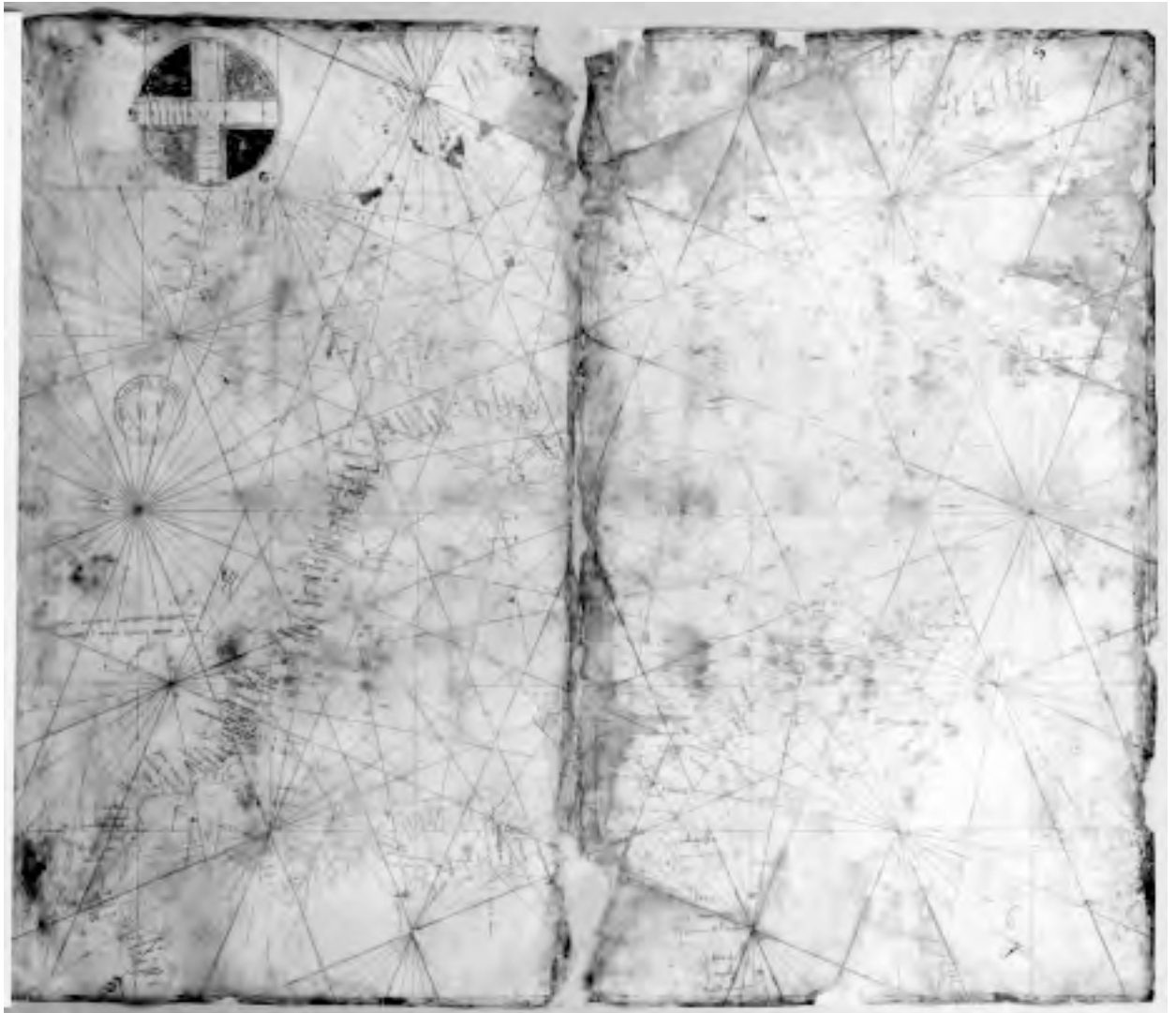
⁴ ποία ὁδὸς ἐστὶ στενόχωρος καὶ κρημνώδης καὶ ἐπικίνδυνος καὶ ποία πλατεῖα καὶ εὐδιάβατος . . . : J. F. Haldon, *Constantine Porphyrogenitus: Three Treatises on Imperial Military Expeditions*, CFHB 28 (Vienna, 1990), 82.

⁵ ἀτριβεῖς καὶ μονίους . . . : Life of St. Constantine the Jew, AASS, Nov. 4:635.

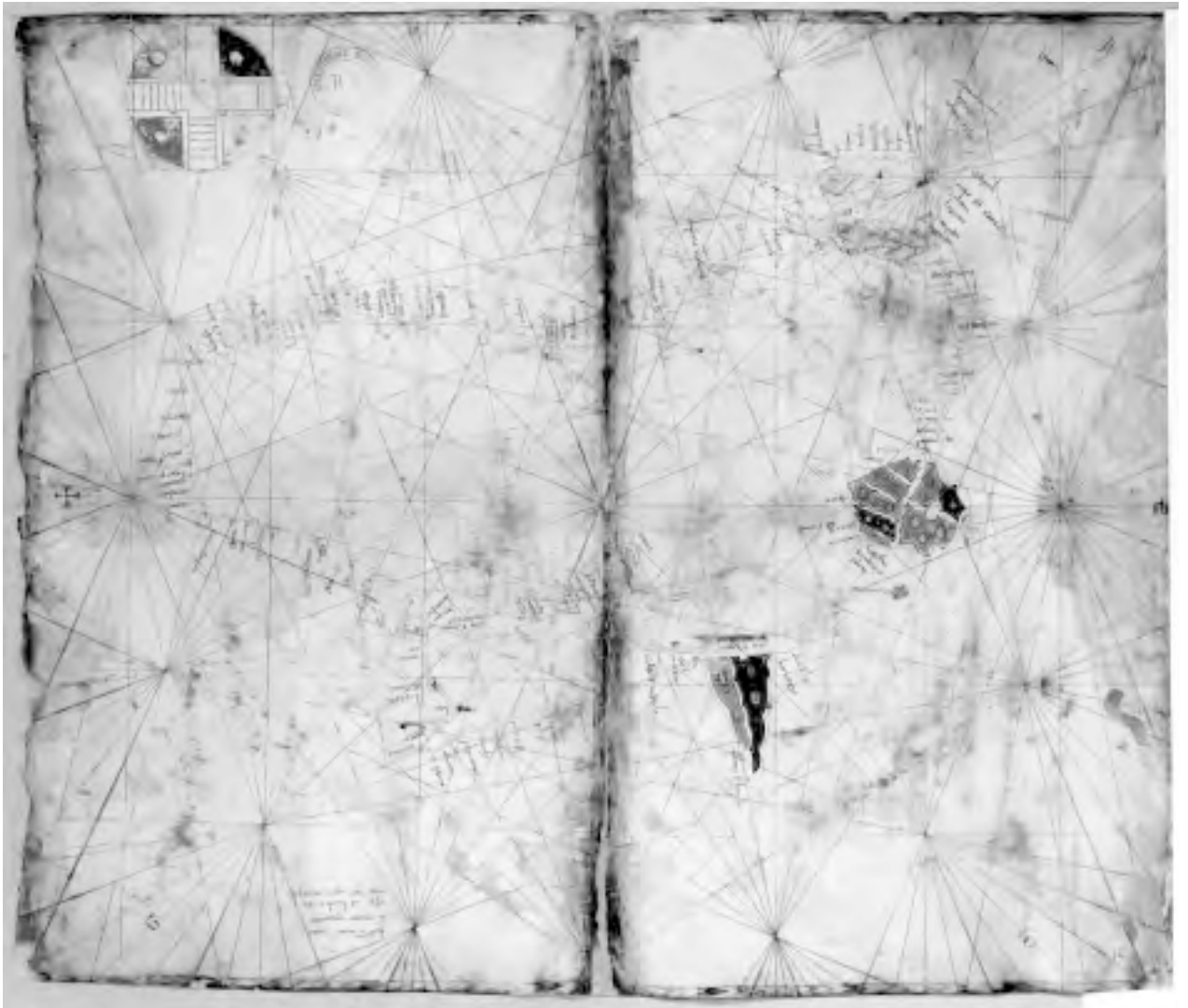
⁶ In Ankyra, a certain John was honored as “benefactor of the land” (εὐπάροχος τῆς πατρίδος), because he had constructed a road near the city: S. Mitchell, “Inscriptions of Ancyra,” *AnatSt* 27 (1977): 91–92. The ἐλλογιμώτατος σχολαστικός and πατὴρ πόλεως of Tarsos oversaw the construction of roads: CIG 3:4438; G. Dagron and D. Feissel, *Inscriptions de Cilicie* (Paris, 1987), 215–16. In Asia Minor, Bishop Paulos supervised the erection of a bridge: W. M. Ramsay, “Inscriptions de la Galatie et du Pont,” *BCH* 7 (1883): 22, no. 11.



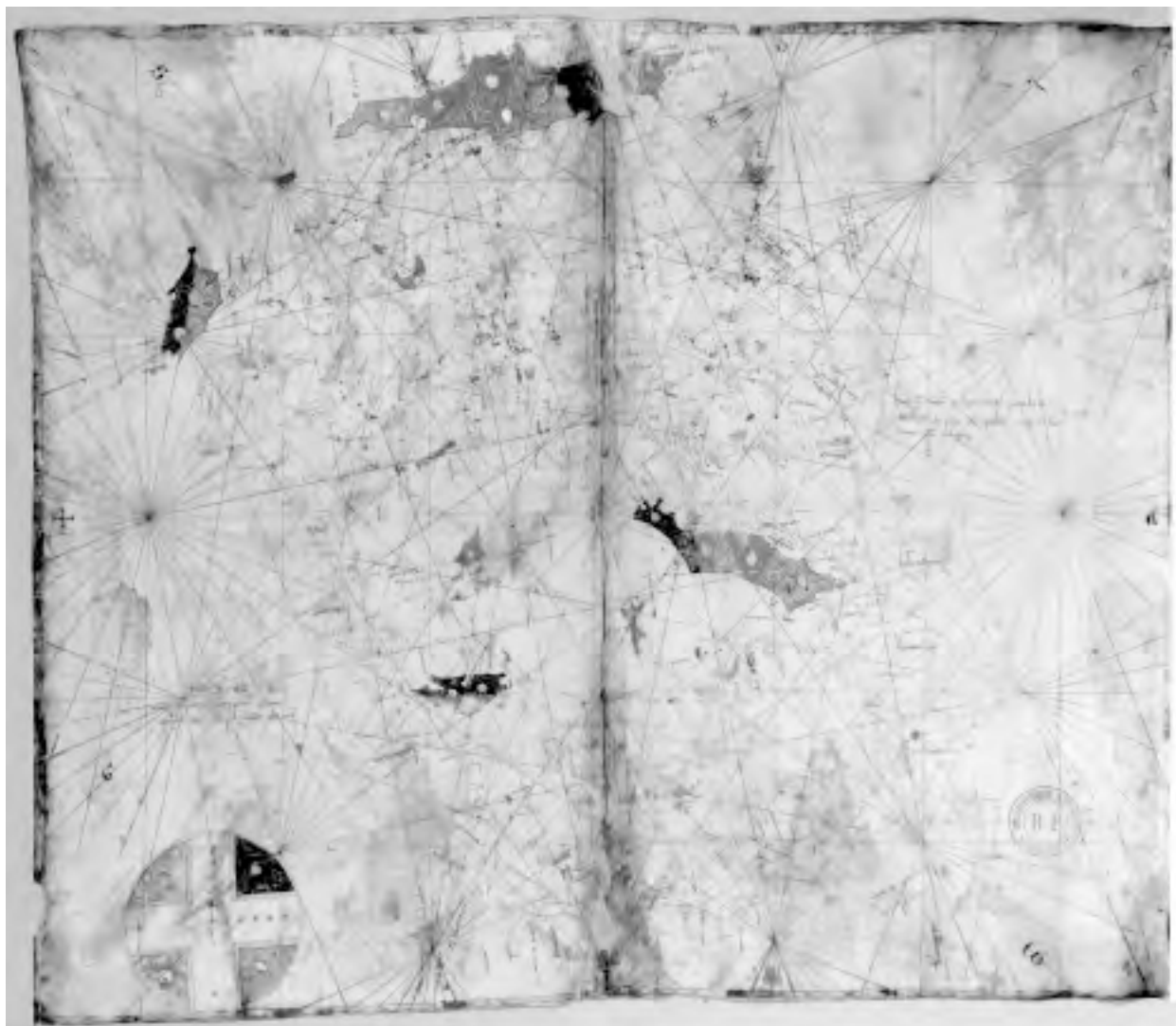
1. Routes and toll and customs stations (after H. Antoniadis-Bibicou, Recherches sur les douanes à Byzance [Paris, 1963])



2. The Atlas of Petrus Visconte, 1313 (after M. Mollat du Jourdin and M. de la Roncière, *Les portulans: Cartes marines du XIIIe au XVIIe siècle* [Paris, 1984], pl. 3)



3. The Atlas of Petrus Visconte, 1313 (after Mollat du Jourdin and De la Roncière, *Les portulans*, pl. 2)



4. The Atlas of Petrus Visconte, 1313 (after Mollat du Jourdin and De la Roncière, *Les portulans*, pl. 4)

dromos), which provided state-owned mounts for public messengers, foreign ambassadors, officers on active service, and shipments of tax in gold. A significant number of large, well-organized way stations (*mansiones*) and smaller stops where fresh horses could be obtained (*mutationes*) had been opened along the main road arteries.⁷

The reform in the functioning and organization of the *demosios dromos* that took place in the time of Justinian, in the form of consular decrees issued by John of Cappadocia, is known to us from the sources. Prokopios describes the reform and relates that prior to it there were between five and eight stations on what would be the length of a day's march for "an active man" (εὐζώνου ἀνδρός). At each station there were forty horses, making it possible to cover ten days' march in one. This enabled those who lived in the hinterland to sell their crops and pay their taxes. Prokopios then goes on to complain that when Justinian closed the station at Dakiviza, on the road from Chalcedon to Nikomedeia, he compelled those traveling from Constantinople to Bithynia to make their way by sea (ναυτίλλεσθαι), while throughout the east (ξύμπασαν ἔω), as far as Egypt, the emperor had slowed down movement along the *demosios dromos* by replacing the horses with donkeys, leaving untouched only the operation of the road that led to the frontier with Persia.⁸ A similar passage in John Lydos also notes that the earlier manner in which the *demosios dromos* was organized had been done away with, especially in the *dioikesis* of Asia. The abolition of the stations had disastrous results for the farmers who had sold their products there, and those who lived far from the sea found it impossible to transport their goods for sale.⁹ It is in conjunction with these reforms of the *cursus publicus* that G. Dagron interprets the *Diatagma peri kataboles synetheion* to the *curiosi* of Seleucia in Pieria (6th century) and the strengthening of communications by sea.¹⁰

In the Byzantine period, the services of the *dromos* or *oxys dromos* were controlled by the logothete of the *dromos*, a post first mentioned in the sources in 760; with his staff, he was responsible, among other things, for maintaining the road network and operating the imperial postal service. The *strateia* of the *dromos* and the functioning of the corvée system in general were in the hands of the *chartoularioi* of the *dromos*, who made sure that the stations were equipped with animals and staffed, and who looked after the maintenance of the roads.¹¹ The earlier distinction between the *cursus clabularis*

⁷ A. H. M. Jones, *The Later Roman Empire, 284–602* (London, 1964), 2:830–34; A. Demandt, *Die Spätantike* (Munich, 1989), 346–48; M. Hendy, *Studies in the Byzantine Monetary Economy c. 300–1450* (Cambridge, 1985), 73, 81, 99–100, 294–96, 311, 602–13.

⁸ Prokopios, *Secret History*, Haury-Wirth ed., 3:180–83.

⁹ Ioannis Lydi *De magistratibus populi Romani libri tres*, ed. R. Wünsch (Stuttgart, 1967), 3.1: 151; cf. M. Hendy, "Economy and State in Late Rome and Early Byzantium: An Introduction," in *The Economy, Fiscal Administration and Coinage of Byzantium* (Northampton, 1989), 1:1–23.

¹⁰ G. Dagron, "Inscriptions inédites du Musée d'Antioche, II: Un tarif des sportules à payer aux *curiosi* du port de Séleucie de Piérie (VIe siècle)," *TM* 9 (1985): 435–55.

¹¹ N. Oikonomides, *Les listes de préséance byzantines des IXe et Xe siècles* (Paris, 1972), 311–12; A. Stauridou-Zaphraka, "Η ἀγγαρεία στὸ Βυζάντιο," *Βυζαντινά* 11 (1982): 21–54; A. Dunn, "The *Kommerkiarios*, the *Apotheke*, the *Dromos*, the *Vardarios* and the *West*," *BMGS* 17 (1993): 3–24; J. Nesbitt and N. Oikonomides, eds., *Catalogue of Byzantine Seals at Dumbarton Oaks* (Washington, D.C., 1991), 1:1.5.

and the *cursus velox* does not seem to have survived into the Byzantine period, as was once believed.¹² From the sources, and especially from the lead seals, we know of the functions of the *dromos tes Dyseos*, the West Road, which served the European provinces apart from Macedonia and Thrace, and of the East Road, the Armeniac Road, the Thracian Road, and the Melania (Malagina) Road (respectively, the *dromos ton Anatolikon, ton Armeniakon, tes Thrakes*, and *ton Melanion*), also leading east.¹³

Although we know how the services of the *oxys dromos* were organized, it is difficult to trace its course in geographical terms. Michael Psellos says that in both east and west there were stations and stables, with four or six “fast beasts of burden” at each.¹⁴ A letter by the same author refers to the publicly owned horses as κόντουρα εἰς τὰς ἀλλαγὰς,¹⁵ while a document from the Iveron monastery, dating from 1104, mentions the δρόμος τῶν Κουντούρων in the vicinity of the southern foothills of Mount Pangaion.¹⁶ In the Balkans, in addition to the way stations along the Via Egnatia there were others on the road from the Danube to Thessalonike.¹⁷ In Asia Minor, the public road must have run through Nicaea, Malagina, Dorylaion, Caesarea, and Melitene or have headed south into Syria through the Cilician Gates.¹⁸ This would have been the road taken by the *koubikoularios* Samonas, who at his own expense and using his own horses—judging “the public horses at each change” to be useless—fled to the Arabian border in 904.¹⁹ From Ibn Hawqal, writing in the late tenth century, we know the stations on the road from Kamacha to Constantinople via Charsianon, Nikomedeia, and Chalcedon, and he also describes the road from Constantinople to Melitene.²⁰ Anna Komnene states that the Latins, with their Roman army, captured Antioch “along the so-called *oxys dromos*,”²¹ that is, through the valley of the Orontes.

There are also references in the sources to the “public road” (δημοσία ὁδός) near Kotyaion in Phrygia,²² the “public way of the imperial road” (δημοσία στράτα τοῦ βασιλικοῦ δρόμου),²³ the “imperial road” (βασιλικὸς δρόμος) in Macedonia,²⁴ and the

¹² By V. Laurent, *Le corpus des sceaux de l'Empire byzantin*, vol. 2, *L'administration centrale* (Paris, 1981), 195–262. On this question, see Hendy's objections in *Studies*, 608 n. 238.

¹³ B. Koutava-Delivoria, “Les 'Οξέα et les fonctionnaires nommés τῶν ὀξέων: Les sceaux et les étoffes pourpres de soie après le 9ème siècle,” *BZ* 82 (1989): 184 n. 53.

¹⁴ Michael Psellos, “Ερμηνεῖαι εἰς κοινολεξίας, 3, Εἰς τὴν φωνὴν τὴν λέγουσαν, Σήμερον τὰ ἄγια κόντουρα,” in *Μεσαιωνικὴ Βιβλιοθήκη*, ed. K. Sathas, 7 vols. (Venice–Paris, 1872–94; repr. Athens, 1972), 5:532.

¹⁵ *Ibid.*, 370: ὅπως διορίσῃται καὶ στήσουσι κόντουρα εἰς τὰς ἀλλαγὰς τὰς πλησιαζούσας τῷ ἡμετέρῳ καὶ σῶ θέματι.

¹⁶ *Actes d'Iviron*, ed. J. Lefort, N. Oikonomides, and D. Papachryssanthou, *Archives de l'Athos*, 4 vols. (Paris, 1985–95), 2: no. 52, line 200 (hereafter *Iviron*).

¹⁷ See below, note 62.

¹⁸ Hendy, *Studies*, 609.

¹⁹ *Theophanes Continuatus*, ed. I. Bekker (Bonn, 1838), 369; *Georgius Monachus*, ed. I. Bekker (Bonn, 1838), 863–64.

²⁰ Hendy, *Studies*.

²¹ *Anne Comnène, Alexiade*, 11.4.1, ed. B. Leib, 3 vols. (Paris, 1937–45), 3:19.

²² According to the Life of Luke the Stylite: A. Vogt, “Vie de S. Luc le Stylite,” *AB* 28 (1909): 21.

²³ See below, 63–64.

²⁴ *Iviron*, 2: no. 35, line 36.

“public avenue”(δημοσία λεωφόρος) that ran from Thessalonike south into Thessaly,²⁵ while sections of the Via Egnatia at the village of Radolibos²⁶ and near Rhegion²⁷ are described as “the paved roads” (πλακωτὸς δρόμος).

A day’s journey on horseback along the *demosios dromos* covered a distance of 75 km from one station to the next. From the *Life of St. Aberkios*, written in the first years of Christianity and included by Symeon Metaphrastes in his *Menologion*, we learn that the saint and his companions sailed from Brindisi to the Peloponnese in five days and then, “using the public horses” (δημοσίοις ἵπποις χρησόμενοι), took a further eight days to reach Constantinople.²⁸ Apart from the public horses, the state also provided δημόσια ὀχήματα, public carriages. In the reign of Theophilos (829–842), Manuel, *stratelates* of the East, “covertly leaving the city as far as the Gates and riding in public carriages, escaped as far as the defiles of Syria.”²⁹ The central authorities set up “hotels” (ξενοδοχεῖα) in the cities and at the other points from which the road network could be entered: Nikomedeia, Nicaea, the Sangarios River, the Gates (Pylai), and Lopadion.³⁰

Unless one were to use the facilities provided by the *demosios dromos*, overland travel was a slow business. It has been calculated that beasts of burden—camels and donkeys—moved at a person’s walking rate, and oxen were capable of no more than 3.2 km per hour.³¹ Carts drawn by pairs of oxen were used by monks to transport wheat and other goods at Katabolon in the Propontis in the ninth century.³² In 787 the holy fathers traveling to the Seventh Ecumenical Council at Nicaea in Bithynia “rode horses and mules, served by slaves and post horses.”³³ According to a letter from Theodore of Stoudios in 797, he and his companions, riding horses “such as chanced to them” (ἐφ’ οἷς ἔτυχε ζώοις), covered a distance of approximately 40 km in two days,³⁴ that is, 20–25 km a day. An army on the march would cover some 24 km per day from station to station.³⁵

The Byzantines measured distances in miles (also called σημεία, *semeia*) in days, and

²⁵ *Alexiade*, 5.5.3, Leib ed., 2:24.

²⁶ *Iviron*, 2:48, 51, 53.

²⁷ See below, 68–69 n. 90.

²⁸ *Life of St. Aberkios*, ed. T. Nissen (Leipzig, 1912), 37, PG 115:1233.

²⁹ Λάθρα τῆς πόλεως ἐξελθὼν μέχρι Πυλῶν καὶ τοῖς δημοσίοις ὀχήμασιν ἐπιβὰς ἀπῆλθε φυγὰς μέχρι τῶν κλεισούρων Συρίας . . . : *Georgius Monachus*, 796.

³⁰ See below, 73.

³¹ Jones, *Later Roman Empire*, 2:842.

³² Life of Eustratios, *Analekta Hierosolymitikes Stachyologias*, ed. A. Papadopoulos-Kerameus (Brussels, 1963), 4:387.

³³ ἦγοντο ἵπποις, ἡμίονοις, ἀνδραπόδοις καὶ βερέδοις ὑπηρετούμενοι: Life of Theophanes of Sigriane, in Theophanes, *Chronographia*, ed. C. de Boor, 2 vols. (Leipzig, 1883–85), 2:9–10 (hereafter Theophanes).

³⁴ *Theodori Studitae Epistulae*, ed. G. Fatouros, 2 vols. (Berlin–New York, 1992), 1:15, no. 3. See the comments of J.-C. Cheynet and B. Flusin, “Du monastère ta Kathara à Thessalonique: Théodore Stoudite sur la route de l’exil,” *REB* 48 (1990): 204.

³⁵ G. Dagron and H. Mihăescu, *Le traité sur la guérilla (De velitatione) de l’empereur Nicéphore Phocas*, 963–969 (Paris, 1986), 79.

in *stadia* (1 mile = 7.5 stadia). Ordinals such as “second” (δεύτερον), “fifth” (πέμπτον), or “ninth” (ἐνάτον) were used to indicate the distance in miles from an urban center. The Roman practice of marking distances in miles on pillars (*miliaria*) was not continued in the Byzantine period, though it is mentioned in the sources, where the markers are called “points” (σημεῖα), “boundaries” (ὄροι), or miliasms (μιλιασμοί).³⁶ In some cases, prayers were inscribed upon the *miliaria*, and this “Christianization” of the roads was further emphasized by the practice of erecting crosses on columns at crossroads.³⁷

The frequent and detailed references to the construction or renovation of roads and bridges found in early Byzantine times, and especially in Prokopios in connection with the reign of Justinian, become much rarer in the later period. Roads and bridges were usually constructed for military purposes. The road at Sardis, in the valley of the Hermos, was constructed by the troops of Constans II around 660; it was paved and had a width of some 15 m; the fortifications were repaired at the same time.³⁸ It was also as part of military operations that the bridge near Bizye in Thrace was repaired by Constantine V and his sons in 773/4.³⁹ A hagiographical text of the late sixth or early seventh century mentions that the inhabitants of the village of Bouzaia in Gordiane built a bridge over the Tembros for their own convenience and that of travelers,⁴⁰ while the *Life of St. Lazaros of Mount Galesion* informs us that in the vicinity of this monastery dwelt craftsmen who were skilled in the building of roads.⁴¹ We know little about the state of the old roads and bridges or of how far they were capable of use. In the eleventh century, the roads from Caesarea in Cappadocia to the nearby towns were in good condition.⁴² It was across the bridge over the Barbyssos (or Bathysros) River, which flowed into the Keratios, that Herakleios entered Constantinople in 638, after crossing from Asia Minor to the European shore of the bay of Phidaleia.⁴³ This bridge, which had collapsed, was repaired by Basil I,⁴⁴ and the same emperor repaired the bridge at Rhegion.⁴⁵ The bridge over the Sangarios River, constructed by Justinian, was still a notable sight in the tenth century, according to Constantine VII.⁴⁶ Another bridge, of

³⁶ Eustathios of Thessalonike, PG 136:565: πολλοὶ γὰρ ὄροι καθὰ καὶ μιλιασμοὶ καὶ λίθοις παρασημειοῦνται εἰκαίοις ἀνεστηκόσι, καὶ κίοσιν εὖ ἀποξεσμένοις καὶ βεβηκόσι ἐπ’ ἀσφαλοῦς καὶ πλατύτητι ἀβακίων ἐκ μαρμάρων οἷς καὶ γράμματα ἐκτετύπωνται. See Ph. Koukoules, *Βυζαντινὸν Βίος καὶ Πολιτισμὸς* (Athens, 1948–57), 4:335.

³⁷ D. Feissel, “Bulletin épigraphique,” *REG* 104 (1991): 725; Koukoules, *Βίος*.

³⁸ C. Foss, *Byzantine and Turkish Sardis* (Cambridge, Mass., 1976), 58; C. Morrisson, “Byzance au VIIe siècle: Le témoignage de la numismatique,” *Βυζάντιον: Ἀφιέρωμα στὸν Ἀνδρέα Στράτο*, ed. N. A. Stratos (Athens, 1986), 1:163.

³⁹ See below, note 72.

⁴⁰ *Vie de Théodore de Sykéon*, ed. A.-J. Festugière (Brussels, 1970), chap. 43, 38.

⁴¹ *AASS*, Nov. 3:512: καίοντες τὰς πέτρας καὶ μετὰ ὄξους βρέχοντες εἶτα καὶ σιδηροῖς λατομοῦντες ὁργάνοις, ἐποίησαν ὁδὸν εὐθείαν.

⁴² J. L. Teall, “The Grain Supply of the Byzantine Empire, 330–1025,” *DOP* 13 (1959): 126.

⁴³ *Nikephoros, Patriarch of Constantinople, Short History*, ed. C. Mango (Washington, D.C., 1990), § 25, lines 8–10.

⁴⁴ *Theophanes Continuatus*, 340.

⁴⁵ *De Administrando Imperio*, ed. G. Moravcsik and R. J. H. Jenkins (London–Washington, D.C., 1962–67), 51 (hereafter *DAI*).

⁴⁶ *De Thematibus*, 1.4.23–24, ed. A. Pertusi (Vatican City, 1952), 70; cf. T. Loungis, “Παραδείγματα ἔργων ὁδοποιΐας στὸ Βυζάντιο,” *Δίπτυχα* 6 (1994–95): 41.

a later Byzantine period, was identified by J. Lefort in what is now the bed of the river.⁴⁷ The road that linked Bithynia and Phrygia, described in detail by Prokopios,⁴⁸ may be the same as that mentioned by Anna Komnene.⁴⁹ The rare references to the state and passability of a road include that by Theophanes to the march of Herakleios in 628 and the road leading to Syria via Tauros. As the chronicler notes, this road was chosen even though it was steep and snow covered because “it provided an abundance of food that was easy to obtain.”⁵⁰

In the early Byzantine period, especially after the fourth century (with the barbarian raids and, in particular, the founding of Constantinople), a more general need emerged for a knowledge of the world: for travel, itineraries, and cartographic descriptions. To the political and economic incentives was now added the desire of the pilgrims of the new Christian world to travel east to the Holy Land.⁵¹ The *itineraria*, compiled in Latin, were works designed to provide assistance on these journeys; they recorded a network of itineraries over a vast area and listed the cities and stations on the routes that crisscrossed the empire, together with the distances between them.

The *Itinerarium* of Antoninus deals with the land and sea routes from western into eastern Europe, from Gadeira to Caesarea in Palestine and from the Crimea to Alexandria. It must have taken its final form between 280 and 290 and been based on the figures provided by the department responsible for the *cursus publicus*. The *itinerarium* dealing with the route from Bordeaux to Jerusalem records the towns, stations (*mansiones*), and points where horses could be changed (*mutationes*), and was drawn up in 335.⁵² In the Byzantine period, the principal catalogue of such information is the *Cosmography* of the Anonymous of Ravenna, written in Latin between 600 and 700 on the Roman model for written itineraries. It contains 5,000 geographical names arranged in geographical order from west to east.⁵³

These Roman *itineraria scripta* were closely associated with the production of road maps. According to the military manual of Vegetius (383–395), military commanders ought to be equipped with *itineraria* giving extensive details of all the areas in which the war was to be fought, enabling them to become familiar with the terrain and to know the distances involved, the state of the roads, any forks and side-turnings in them, the rivers, and the mountains. This report suggests that soldiers possessed *itineraria* that not only were written (*scripta*) but also contained drawings in color (*picta*). Only one such “illustrated” map has survived to the present day, the well-known road map called the *Tabula Peutingeriana* (cod. Vindob. 324), prepared in order to show the roads of the empire over a total distance of 104,000 km. The original map was com-

⁴⁷ J. Lefort, “Les communications entre Constantinople et la Bithynie,” in Mango and Dagron, *Constantinople and Its Hinterland* (as above, note 2), 216.

⁴⁸ Prokopios, *Buildings*, 5.3.12, Haury-Wirth ed., 4:155.

⁴⁹ *Alexiade*, 15.4.4, Leib ed., 3:201.

⁵⁰ εὐπορίαν τε καὶ δαψίλειαν τῶν τροφῶν παρεῖχεν: Theophanes, 1:312.20–21.

⁵¹ P. Maraval, *Lieux saints et pèlerinages d'Orient—Histoire et géographie: Des origines à la conquête arabe* (Paris, 1985).

⁵² *Itineraria Romana*, vol. 1, *Itineraria Augusti et Burdigalense*, ed. O. Cuntz (Leipzig, 1929).

⁵³ *Itineraria Romana*, vol. 2, *Ravennatis Anonymi Cosmographia et Guidonis Geographica* (Leipzig, 1940); L. Dillemann, “La carte routière de la Cosmographie de Ravenne,” *BJ* 175 (1975): 165–70.

piled between 335 and 366, but it was based on older sources and on information provided by the *cursus publicus* office. It also contains subsequent additions.⁵⁴ These *itineraria* (both *scripta* and *picta*), archaeological finds, and especially the written sources help in reconstructing the road network.

The Balkans

The physical morphology of the Balkans is notable for a duality: although it contains elements of discontinuity and fragmentation, there are also features that foster unity and communication. While the mountain massifs and high plateaus discourage movement, valleys and places where the ground has subsided—often along the course of the rivers, which in many cases are navigable—make it possible for one place to develop links with others.⁵⁵

The geographical position and physical structure of the area were the basic factors on which the effort to reconstitute the channels and passages of communication and the network of roads relied. The roads driven along the natural passes through the mountain massifs toward the plains, where they led to urban centers, could be divided into two types: access roads (to be used by the army in time of war and traders in peacetime) and roads for internal communications.

The major landmarks in the political history of the Balkans determined the potential for control over these road arteries, for interruptions and for communication in the form of trade agreements between the opposing sides. After the sixth and early seventh centuries, a significant role was played by Avar and Slav raids and by the settlements of Slavs. The founding of the first Bulgarian Empire in 681 in the region between the Danube and Mount Haemos, the wars between Byzantium and the Bulgars in the eighth, ninth, and tenth centuries, the reconquest by the Byzantines of the area south of the Danube in 971, and the overthrow of the first Bulgarian state in 1018 are the most important dividing lines. After the twelfth century, the Serbs took over the dominant role in the Balkans and retained it until the Turkish conquest of the fifteenth century.

Although the settlements of foreign peoples, and wars against them, interrupted communications along the main road arteries that ran northwest-southeast, north-south, and east-west across the Balkans, the trade agreements concluded by the Byzantines did much to facilitate commerce and the movement of people and goods. The treaties of 716 and 815 between Byzantium and Bulgaria made it possible for the Bulgarian hinterland up to the Danube to communicate with the Aegean and Thessalonike, the city where the trade routes ended. Communications along the rivers made transport easier, while the establishment of the *vardarios* and the presence, in the ninth

⁵⁴ K. Miller, *Itineraria Romana* (Stuttgart, 1916); A. and M. Levi, *Itineraria picta: Contributo allo studio della Tabula Peutingeriana* (Rome, 1970). For all the *Itineraria* (*scripta* and *picta*), see O. A. W. Dilke, "Itineraries and Geographical Maps in the Early and Late Roman Empire," in *The History of Cartography*, ed. J. B. Harley and D. Woodward (Chicago–London, 1987), 1:234–57.

⁵⁵ J. Cvijić, *La péninsule balkanique* (Paris, 1918).

century, of *kommerkiarioi* in cities such as Adrianople and Didymoteichon which had been founded along navigable rivers, confirm the trade of this kind.⁵⁶ Communication along navigable rivers is also referred to in the sources, for example, Kaminiates, who reports that the merchants of ninth- and tenth-century Thessalonike who traded with the Bulgars made use of the rivers.⁵⁷ Athonite documents of the fourteenth century refer to payment of the *poriatikon* charged on travel on the rivers and to the positions at which it was collected.⁵⁸

The “Imperial Road”

The most important diagonal land route through the Balkans, called the “imperial road” (βασιλική ὁδός) by the Byzantines, *carksî pat* by the Slavs and *Stambul yol* by the Turks, ran from northwest to southeast.⁵⁹ This road was the continuation of the great military highway that began on the shores of the North Sea, ascended the valley of the Rhine, passed through Milan, Verona, and Aquileia, reached Poetovio, and then descended the valley of the Drava to cross the Sava River at Sirmion (Mitrovica). Singidunum (Belgrade) was the next stop, after which the road continued along the valley of the Danube through Viminacium (Kostolac), Bononia, and Ratiaria. There it turned south along the valley of the Margos (Morava) to Naissos (Niš) and southeast in the direction of Serdica (Sofia). From Sofia it kept up its southeasterly orientation, traversing the narrow pass of Soukeis—also known as Trajan’s Gate or the *claustra sancti Basilii*—in the western fringes of the Haemos range and the Rhodope Mountains before entering the upper valley of the Hebros (Marica) and continuing along the left bank of the river to Philippopolis. From this point on, the imperial road remained close to the Hebros, sometimes crossing the river and sometimes turning a little aside into the lower slopes of the Rhodope range, running through Klokotnitza and Tzernomianou into Adrianople. From that city, an important crossroads on the road system, it continued in a southeasterly direction toward Nike, Boulgarophygon, and Arkadiopolis, passing Drouzipara (Megalo Karistiran), where there is a sixth-century bridge,⁶⁰ and Tzouroulos into the Propontis at Herakleia (Perinthos).

This major diagonal road artery was the principal axis connecting Constantinople with the West, especially after the center of developments there moved north from

⁵⁶ N. Oikonomides, “Le kommerkion d’Abydos: Thessalonique et le commerce bulgare au IX^e siècle,” in *Hommes et richesses dans l’Empire byzantin*, 2 vols. (Paris, 1989–91), 2:241–48; Nesbitt and Oikonomides, *Catalogue of Byzantine Seals at Dumbarton Oaks*, 1:44.5, 44.6, 50.1; see also A. E. Laiou, “Exchange and Trade, Seventh–Twelfth Centuries,” *EBH* 687–88.

⁵⁷ *Ioannis Caminiatae De expugnatione Thessalonicae*, ed. G. Böhlig (Berlin, 1973); E. Todorova, “River Trade in the Balkans during the Middle Ages,” *EtBalk* 4 (1984): 47.

⁵⁸ I. A. Papangelos, “Ὁ Πόρος τοῦ Μαρμαρίου. Πόλις καὶ χώρα στὴν Ἀρχαία Μακεδονία καὶ Θράκη,” *Μνήμη Δ. Λαζαρίδη* (Thessalonike, 1990), 333–52, in particular 346–47.

⁵⁹ C. Jireček, *Die Heerstrasse von Belgrad nach Konstantinopel und die Balkanpässe* (Prague, 1877); P. Lemerle, “Invasions et migrations dans les Balkans,” *RH* 211 (1954): 274; C. Asdracha, *La région des Rhodopes aux XIII^e et XIV^e siècles* (Athens, 1976), 30–34; P. Soustal, *Tabula Imperii Byzantini*, vol. 6, *Thrakien* (Vienna, 1991), 132–35.

⁶⁰ G. Lampousiadou, “Ὁδοιπορικόν,” *Θρακικά* 10 (1938): 259–60.

Rome. Used by pilgrims, travelers, merchants, and soldiers alike, its northern sections were severed by the incursions of Arabs, Slavs, and Bulgars. It was the road taken by the westerners in the First, Second, and Third Crusades, and in 1204 the Latins used it to penetrate into the upper valley of the Hebros. The sources often give the distances from one city to the next, and the length of time required to cover them: from Philippopolis to Constantinople, Anna Komnene notes, took two days and two nights; Geoffrey de Villehardouin gives nine days as the length of the same march. The march from Adrianople to Constantinople, according to Attaleiates, could be covered in three days, while in 1433 Bertrandon de la Broquière gives six days as the time required.⁶¹

North-South Roads

The major arteries running the length of the Balkan peninsula may be described as the invaders' roads. These routes set out from the Danube and, running through the largest urban centers and the important road junctions Naissus and Serdica, proceeded parallel to the courses of the major rivers, the Axios (Vardar) and the Strymon (Struma).

The first and most important north-south axis ran from the Danube and the Margos valley down to Naissos and reached the Axios valley at Skopje. From there it went to Stoboi and through the narrow defile of the Axios (the Iron Gates or Demir-Kapi) in the direction of the Aegean, across the plain of Thessalonike. According to Constantine VII Porphyrogenetos, the distance from Thessalonike to Belgrade on the Danube could be covered in eight days by a traveler moving without haste and stopping overnight.⁶² From Skopje, secondary branch roads enabled travelers to bypass the Axios gorge, riding southwest from Skopje through Herakleia Lynkestis (Monastir-Bitlj) or east through Stypaion (Štip) and Tiberioupolis (Strumica) toward Thessalonike.⁶³ This second route is the one described by Nikephoros Gregoras, envoy of Andronikos II to the *kral* of Serbia in 1327, in a letter in which he states that he covered the distance from Strumica to Skopje in three days, and when his party arrived they saw the Axios as "the greatest [river] after the Strymon" and "navigable in some places and at some times."⁶⁴ The Axios is also described by Theophylaktos of Ohrid in a letter dating from 1106. He notes that the river could be crossed neither on foot nor on horseback: there was no bridge because of the "river toll-posts" (ποταμοτελωνεῖα), and the crossing was made on a "small boat."⁶⁵ Kantakouzenos confirms that the Axios was navigable as far as Skopje in the spring, when timber was floated down it.⁶⁶

⁶¹ Asdracha, *La région des Rhodopes*, 49.

⁶² *DAI*, 42, 15–18.

⁶³ For their alignments and routes in Roman times, see the works of the Union Académique Internationale under the titles *Tabula Imperii Romani: Naissus-Dyrrhachion-Scupi-Serdica-Thessalonike*, K 34 (Ljubljana, 1976), and *Tabula Imperii Romani, Philippi*, vol. 1, K 35 (Athens, 1993).

⁶⁴ ναυσίπορος ἐνίστε καὶ ἐνιαχοῦ. *Correspondance de Nicéphore Grégoras*, ed. R. Guiland (Paris, 1927), 43.

⁶⁵ Theophylakt of Ochrida, *Correspondance*, ed. P. Gautier (Thessalonike, 1986), no. 110, 530–31.

⁶⁶ Todorova, "River Trade," 47.

The other important north-south axis also had its starting point on the Danube, running south to Serdica and then following the valley of the Strymon through the *kleisourai* of the Strymon (Roupel) to Serrai and Drabeskos before ending at the important intersection of Amphipolis. In the Byzantine period, the Strymon River in this area was called Marmari, as was the settlement to the north and northeast of the section of ancient Amphipolis lying along the river. Here Gregory Pakourianos founded a *xenodocheion* (hostel) near the bridge, opening another near the west coast of the Strymonic Gulf.⁶⁷ Nikephoros Gregoras describes the way north from Amphipolis and calls the Strymon “very great,” “deep-eddying,” and “impossible to cross” for those on foot or horseback.⁶⁸

The old Roman road called Trajan’s Track also led south from the Danube toward Philippopolis. The sources describe it at the time of the wars against the Avars; this was the road, they tell us, that the *strategos* Komentiolos took in the winter of 599/600 on his way from Novae to Philippopolis—despite the advice of the locals, who informed him that “no one had traveled along it for ninety years” (ἀδιαξόδευτον ἀπὸ ἐτῶν ἐνενήκοντα).⁶⁹

A coastal road linked the major ports on the west coast of the Black Sea. From the Danube estuary, it passed through Tomis (Constanza), Odessos (Varna), Mesembria, Anchialos, Sozopolis, Agathopolis, Thynias (Staniera), and Medeia; from the last two places it headed inland and joined the road leading to Tzouroullous.⁷⁰

Horizontal and Perpendicular Roads

The destinations of the roads that crisscrossed the Balkans in horizontal and perpendicular directions were the major urban centers of the interior. The Varna road set out from the Black Sea and crossed the mountains to Stilvno and then went to Beroe (Stara Zagora) and Philippopolis. The road inland from Anchialos led to Therma, Aetos, and Markellai, with a branch south along the valley of the Tounza River to Hyampolis and Adrianople. This road would also take the traveler to the intersection of Stilvno and southwest to Philippopolis. From Pyrgos (Burgas) and nearby Develtos there was a bridge over the Skaphidas River⁷¹ and the traveler could choose to head west to Hyampolis or south to Adrianople. Another branch of the road led to Saranta Ekklesiai (Kirklareli), Bryse, and Tzouroullous. It was here, though we do not know exactly where, between Bizye and Saranta Ekklesiai in the direction of Lithosoria that Constantine V and his sons renovated a bridge in 773/4.⁷²

The great road along the valley of the Ardas⁷³ ran crosswise through the area and,

⁶⁷ P. Lemerle, *Cinq études sur le XIe siècle byzantin* (Paris, 1977), 151; *ibid.*, C. Asdracha, 179.

⁶⁸ “μέγιστον,” “βαθυδίην,” “ἄπορον”: *Correspondance de Nicéphore Grégoras*, 33, 35.

⁶⁹ Theophanes, *Chronographia*, 1:282; *Theophylacti Simocattae Historiae*, ed. C. de Boor (Leipzig, 1887), 290.

⁷⁰ Soustal, *Thrakien*, 145–46.

⁷¹ *Ibid.*, 444.

⁷² C. Mango and I. Ševčenko, “Three Inscriptions of the Reign of Anastasius I and Constantine V,” *BZ* 65 (1973): 384–93.

⁷³ Asdracha, *La région des Rhodopes*, 34–37.

with its branch roads, linked the hinterland with the Propontis and Constantinople in one direction and Macedonia and the Adriatic in the other. It began at the port of Rhaidestos, passing through Chariopolis and crossing the Regina and Hebros Rivers on its way to Didymoteichon. It then headed northwest, through the mountainous area of Achrido, and ran through a more densely settled area to Nikopolis on the Nestos and on to the valley of the Strymon. A branch of the Ardas valley road led from Mneiakos to Stenimachos, where Gregory Pakourianos founded another “hostel” on two roads,⁷⁴ and then went to Philippopolis. According to Villehardouin, writing in 1206, the journey from Mneiakos to Stenimachos took three days. From the “horizontal” Ardas valley road, at the Adrianople junction, another main road led off to the south down the Hebros valley to Didymoteichon. It continued in a southerly direction, still running parallel to the Hebros valley, to its junction with the Via Egnatia near the river estuary.

The Hebros was not important only for this road artery: the river itself was also a major route for communications.⁷⁵ It was navigable for large vessels as far as Adrianople, where there was also a bridge by which it could be crossed,⁷⁶ and small craft could sail from Adrianople to Philippopolis. Crossings from one bank to the other were made by “light boats” called *akatia*. In 972, according to Leo the Deacon,⁷⁷ the order was given to move grain, animal feed, and weapons to Adrianople on special boats (διὰ σιτηγῶν πλοίων). Edrisi says that the Hebros at Philippopolis could be crossed only by boat. Kritoboulos of Imbros preserves more details, noting that the Hebros was navigable the year round near its estuary, and that when it reached Doriskos on the right bank it flowed into the sea near Ainos, a port on the Aegean. Kritoboulos adds that the Hebros “allows those who live in the city [Ainos] to trade along it, using cargo vessels, with the hinterland and with some of the cities in the interior that lie near the river.”⁷⁸ Near Ainos, in the time of Alexios I Komnenos, a makeshift bridge was constructed over the Hebros by lashing boats to long pieces of wood, and the army passed over it.⁷⁹

The Via Egnatia

When the main roads from the interior turned south, most of them intersected with the Via Egnatia, the important Roman road that ran crosswise through the Balkans and provided communications between the Adriatic, the Aegean, and the Propontis, between Rome and Constantinople. This was the most important road axis in the em-

⁷⁴ Lemerle, *Cinq études*, 151; *ibid.*, Asdracha, 177.

⁷⁵ Asdracha, *La région des Rhodopes*, 45–47; Todorova, “River Trade,” 47.

⁷⁶ *Georgii Acropolitae Opera*, ed. A. Heisenberg, corr. P. Wirth, 2 vols. (Stuttgart, 1978), 1:111; cf. Asdracha, *La région des Rhodopes*, 45 n. 6.

⁷⁷ *Leonis diaconi Caloënsis historiae libri decem*, ed. C. B. Hase (Bonn, 1828), 126–27; see Todorova, “River Trade,” 50.

⁷⁸ παρέχει δὲ καὶ τοῖς ἐν τῇ πόλει δι’ αὐτοῦ πλοίοις φορτηγοῖς τὰς ἐμπορίας ποιεῖσθαι ἕξ τε τὴν μεσόγειαν καὶ τινὰς τῶν ἐν αὐτῇ πόλεων πλησιοχώρους αὐτῶ: *Critobuli Imbriotae Historiae*, ed. D. R. Reinsch (Berlin, 1983), B, 12.2.4: 104.

⁷⁹ *Alexiade*, 8.4, Leib ed., 2:137.

pire; the *cursus publicus* / *demosios dromos* followed it, and it was an extension of the Via Appia from Rome to Brindisi. From that port, travelers crossed by sea to Dyrrachion, Apollonia, and Avlon (they could also sail to Avlon from Hydrous [Otranto]). Dyrrachion and Avlon had since antiquity been the starting points for this important trans-Balkan road, details of whose exact route are better known to us in the early period,⁸⁰ but whose operation—and the breaks in it—can also be traced through the Byzantine period.⁸¹

The leg of the road that set out from Dyrrachion followed the lower course of the Skumbi to the station at Clodiana (modern Pequini). The route from Avlon led to Apollonia and then on to Clodiana. From Pequini, the Via Egnatia headed up the Skumbi valley to Elbasan, passing various stations on the way. Then it ran around Lake Ohrid to the north, entering Macedonia via Strounga and Ohrid and heading toward Thessalonike. We do not know whether this western section of the Via Egnatia held to the same course in the later Byzantine period. Byzantine texts describing military operations in the eleventh century make it possible to argue that there was a road from the Adriatic into Macedonia along a different route, though we do not know precisely what its course may have been. It may well have set out from Dyrrachion and run toward Lake Ohrid via the Devol. According to the anonymous chronicler of the *Gesta Ducis Gotfridi*, the counts of Normandy and Blois landed at Dyrrachion and marched on Thessalonike after crossing the Deavolis (Devol) River. Edrisi confirms the use of this land route, giving the length of the march from Dyrrachion to the Devol as two days, with a further four needed to reach Ohrid. It can be concluded that, although it did not supplant the old route, the road along the valley of the Deavolis was in use in the eleventh and twelfth centuries, and since the time of Basil II there had been military garrisons to control it. Venetian documents of 1161 demonstrate that the road from Dyrrachion to Constantinople was the one that ought to be taken by those carrying money or lightweight but valuable goods (presumably silk).⁸²

From the north shore of the lake, the Via Egnatia followed a route via Ohrid (Lychnidos) and Monastir (Herakleia Lynkestis-Bitolj) before turning at Kleidi, passing Lake Vegoritis and descending the upper valley of the Aliakmon to Pella. From there it crossed the Axios—we do not know exactly where—and the Echedoros (Gallikos) River before arriving at Thessalonike, though it did not run through the city. Travelers wishing to use it to move east had to leave Thessalonike by the West Gate and join the Via Egnatia as it passed close to Lakes Koroneia and Volve before continuing to Apollonia and thence through the narrow defile at Rentina.⁸³

⁸⁰ A bibliography for the Roman and early Byzantine period may be found in A. Avraméa, “Tracé et fonction de la Via Egnatia: Du IIe av. au VIe ap. J.-Chr.,” in *The Via Egnatia under Ottoman Rule, 1380–1699*, ed. E. Zachariadou (Rethymnon, 1996), 3–7. For the route as far as Amphipolis, see *Tabula Imperii Romani*, K 34, and for Amphipolis to the Hebros, see *Tabula Imperii Romani*, K 35, I.

⁸¹ Oikonomides, “The Medieval Via Egnatia,” in Zachariadou, *The Via Egnatia under Ottoman Rule* (as above, note 80), 9–16.

⁸² A. Duccellier, *La façade maritime de l’Albanie au Moyen Age: Durazzo et Valona du XIe au XVe siècle* (Thessalonike, 1981), 76–84.

⁸³ J.-M. Spieser, *Thessalonique et ses monuments du IVe au VIe siècle: Contribution à l’étude d’une ville paléochrétienne* (Paris, 1984), 21–24, fig. 1.

According to Harun Ibn Yahya (late 9th century),⁸⁴ it took twelve days to travel to Constantinople from Thessalonike, the highly important urban center to which all the overland routes in the Balkans and sea-lanes in the Aegean led. The great city of Thessalonike attracted merchants from all over the known world, as we learn from Kaminiates and the twelfth-century satirical dialogue the *Timarion*. Indeed, the latter text informs us that merchandise from the Black Sea was shipped to Constantinople and then traveled overland to Thessalonike carried by great caravans of horses and mules.⁸⁵

After the Rentina pass, the Via Egnatia crossed the lower course of the Strymon at the “Marmari crossing,”⁸⁶ turned inland via Drabiskos, and passed Angista, Symbole, and the north slopes of Mount Pangaion on its way to Philippi, after which it headed south toward the sea again, reaching it at Christoupolis (or Neapolis; modern Kavala). There was also a road—what the ancients had called the “low road”—from Chrysoupolis over the southern slopes of Pangaion and the northern slopes of Mount Symbolon into the plain of Philippi. This must have been the route taken by Gregory of Dekapolis in the ninth century.⁸⁷

After Christoupolis, the Via Egnatia headed northeast, through Akontisma (3 km from modern Nea Karvali) and turned inland to Topeiros, where the Nestos River was crossed. After Xanthe, the traveler would reach Lake Bistonis (Poros) at Peritheorion (Anastasiopolis). The road held its easterly course to Mosynoupolis (Maximianopolis), then headed south-southeast to Makre on the coast. Traces of its surface have survived near the villages of Meste, Komaros, and Dikella. Another branch from Mosynoupolis to Gratianon descended to Makre through the hills. Now the Via Egnatia continued eastward along the coast to Trajanopolis and Bera. Between Trajanopolis and Kypsela, it crossed the Hebros by a bridge somewhere in the vicinity of the villages of Peplos, Kepos, and Gemiste, and a branch road linked Kypsela to the port of Ainos. The last stretch of the route ran through Rousion (Kesane), Malgara, Apros, Rhaidestos, Herakleia, Daonion, Selymbria, Epibatai, Aigialoi, Damokraneia, Athyra (Büyük Çekmece), and Rhegion (Küçük Çekmece) to Constantinople itself.⁸⁸

According to the *Itinerarium* of Antoninus, the road from Herakleia to Constantinople did not take the coastal route, presumably in order to avoid the lagoons at Rhegion. However, the coastal route is described in the *Itinerarium* of Bordeaux.⁸⁹ Prokopios begins his description of the Via Egnatia from the fortress called Strongylon in the suburbs of Constantinople, from which the road led out to Rhegion; since, as he writes,

⁸⁴ A. Vasiliev, “Harun Ibn Yahya and His Description of Constantinople,” *SemKond* 5 (1932): 162.

⁸⁵ *Ioannis Caminiatae De expugnatione Thessalonicae*, 9.5; Ps.-Luciano, *Timarione*, ed. R. Romano (Naples, 1974), 53–55; cf. Laiou, “Exchange and Trade,” *EHB*.

⁸⁶ P. Lemerle, *Philippes et la Macédoine orientale à l'époque chrétienne et byzantine* (Paris, 1945), 172 n. 1; Papangelos, “Ο Πόρος,” 333–52.

⁸⁷ F. Dvornik, *La Vie de saint Grégoire le Décapolite et les Slaves macédoniens au IXe siècle* (Paris, 1926), 54–55. Cf. J. Karayannopoulos, *Les Slaves en Macédoine*, appendix: C. Bakirtzis, *A propos de la destruction de la basilique paléochrétienne de Kípia (Pangée)* (Athens, 1989), 5–38.

⁸⁸ Asdracha, *La région des Rhodopes*, 25–30; Soustal, *Thrakien*, 136–38.

⁸⁹ C. Mango, *Le développement urbain de Constantinople* (Paris, 1985), 32–33.

the road was “rough” (άνώματος), “boggy” (τελματώδης), and “hard to pass” (δυσπάριτος), Justinian had large stones laid so that it was paved and widened it so that two carriages could pass. In addition, he erected a stone bridge at the Rhegion crossing (called Myrmex), replacing the existing wooden structure and thus making it safe to pass.⁹⁰ The bridge was repaired by Basil I.⁹¹ At a much later date, Kritoboulos of Imbros writes of the bridges at Athyra and Rhegion.⁹² The village of Enneakosia, referred to in the *Typikon* of the monastery of Constantine Lips and by Kantakouzenos, was near Rhegion, “below the paved road,” and the “Camel Bridge” (Καμήλου Γέφυρα) was there, too.⁹³ The coast road from Rhaidestos to Ganos is described by George Oinaïotes in the first half of the fourteenth century: from Constantinople he crossed over to Athyra and Damokraneia, stopped at the spot called Aigialoi, went through Epibatai, and reached Selymbria. The distance from Constantinople to Selymbria, totaling some 70 km, took two days to cover. Oinaïotes then traveled on through Daonion and Abydenoi, ending a safe and trouble-free journey at Rhaidestos. The road from Rhaidestos to Ganos, by way of contrast, was hard.⁹⁴

The great imperial, military, and commercial road called the Via Egnatia was rendered inoperative from time to time as the result of invasions, and the various sections of it, especially in the west, were not used equally. Some interruptions in its use are specifically mentioned in the sources; we may assume that some of them came about because travelers preferred to travel by sea from one coastal city to another, thus avoiding the difficulties of the land route. As early as the late fourth century, the west section was captured by the Visigoths, causing a disruption of communications and leading Eunapius to complain that travelers from the east to the west were forced to make the long journey by sea.⁹⁵ The west section of the road was closed once more at a later date, as a result of Avar and Slav raids and settlements along it. In the east, too, there were difficulties in keeping the road open despite the mopping-up operations conducted by the Byzantine emperors in 658, 678, and 687/8. The situation was particularly bad to the west of Thessalonike, as can be seen in the journeys of Theodore of Stoudios in 797 and Gregory of Dekapolis around 830: both travelers preferred the sea voyage.

With the exception of the wars between Byzantium and the Bulgars in the ninth and tenth centuries, the east section of the Via Egnatia, which linked Constantinople and Thessalonike, was always open. The establishment of the themes of Thessalonike and Strymon contributed to this.⁹⁶ However, in both the ninth and tenth centuries, the

⁹⁰ Prokopios, *Buildings*, 4.8.5, Haury-Wirth ed., 4:8.17.

⁹¹ *DAI*, 51.

⁹² *Critobuli Imbriotae Historiae*, B, 10.1.

⁹³ κάτωθεν τῆς πλακωτῆς οδοῦ: R. Janin, *Constantinople byzantine* (Paris, 1964), 449.

⁹⁴ A. Karpozilos, “Ταξιδιωτικές περιγραφές και εντυπώσεις σε ἐπιστολογραφικά κείμενα,” Ἡ Ἐπικοινωνία στὸ Βυζάντιο (Athens, 1993), 531–34.

⁹⁵ “Fragments de l’Histoire d’Eunape,” appendix to Zosime, *Histoire nouvelle*, ed. F. Paschoud (Paris, 1986), 3:326–27.

⁹⁶ Oikonomides, “Via Egnatia.”

Slavs who had settled in the defiles of the Strymon harried travelers along the road.⁹⁷ In the tenth century, the Arab writer Masudi tells us that the Hungarians present in the Axios valley and along the Via Egnatia had caused a breakdown in communications with the West.⁹⁸ The west part of the road was completely unusable during the Bulgarian wars and until the recapture of the area by Basil II. After the eleventh century, the Via Egnatia was once more the main axis linking Constantinople to the West. After crossing the Adriatic and marching through western Macedonia in 1097, the forces of the First Crusade came to the Vardar and then advanced on the capital via Serrai, Philippoi, Christoupolis, Mosynopolis, and Kesane. After the recapture of Constantinople by the Byzantines in 1261, the east part of the Via Egnatia became once more the main axis for communications with Thessalonike, although poor weather conditions were often an impediment to travel: in November 1298, there was so much snow on the road from Selymbria to Thessalonike that the journey took Andronikos II more than a month.⁹⁹ To the west, the road fell into disuse, and the coastal cities on the Adriatic, Dubrovnik in particular, communicated with Thessalonike via Serbia and the valley of the Vardar. Even further east, communications dwindled between Constantinople and Thessalonike after the 1320s because of the civil war between the two Andronikoi. After 1341, as Angeliki Laiou points out, we have no references for use of the Via Egnatia at all; by that time, communications were by sea alone.¹⁰⁰ The Via Egnatia regained its military importance at the time of the Ottoman military operations of the 1380s.¹⁰¹

Roads in the Southern Balkans

Roads branched south off the Via Egnatia leading into Macedonia, Thessaly, and Epiros and from there toward central Greece and the Peloponnese. The main road, which Anna Komnene calls the *demosia leophoros* (public avenue) and which is mentioned by the *Tabula Peutingeriana*, headed south from Thessalonike along the coast into Thessaly.¹⁰² After Katerine and Platamon, the road entered the plain of Larissa via the narrow defile of Tempe and Lykostomion. Another north-south road avoided the Tempe gorge and headed along the lower eastern slopes of Mount Ossa, through Stomio (Tsagezi), Karitsa on the coast (mentioned by Edrisi), and Vilika (shown as Verliqui on the portulans). This was the road taken by Alexios Komnenos in 1083 to outflank the Tempe defile, which was guarded.

⁹⁷ P. Lemerle, *Les plus anciens recueils des miracles de saint Démétrius, et la pénétration des Slaves dans les Balkans*, 2 vols. (Paris, 1979–81), 2:192 n. 304.

⁹⁸ N. Oikonomides, "Vardariotes-Wl.nd.r-V.n.nd.r: Hongrois installés dans la vallée du Vardar en 934," *SüdostF* 32 (1973): 1–8.

⁹⁹ A. E. Laiou-Thomadakis, *Peasant Society in the Late Byzantine Empire* (Princeton, N.J., 1977), 28.

¹⁰⁰ A. Laiou, "Η Θεσσαλονίκη, ή ένδοχώρα της και ό οικονομικός της χώρος στην εποχή των Παλαιολόγων," in Βυζαντινή Μακεδονία, 324–1430 μ.Χ. (Thessalonike, 1995), 183–94.

¹⁰¹ E. Zachariadou, "From Avlona to Antalya: Reviewing the Ottoman Military Operations of the 1380s," in eadem, *The Via Egnatia under Ottoman Rule* (as above, note 80), 227–32.

¹⁰² A. Avramea, "Η Βυζαντινή Θεσσαλία μέχρι τοῦ 1204 (Athens, 1974), 71–117; J. Koder and F. Hild, *Tabula Imperii Byzantini*, vol. 1, *Hellas und Thessalia* (Vienna, 1976), 90–100.

There were other routes into Thessaly through the passes in the foothills of Mount Olympus, including the defiles of Petra and Sarantaporos. These roads intersected with the Larissa-Trikkala road, which ran west into Epiros and south-southeast to the Pagasetikos and Malliakos Gulfs. The east-west route, described by Edrisi, began on the Dalmatian coast at Dyrrachion and Avlon and led through Dryinopolis, Ioannina, and Kastoria to Trikkala and Larissa and then on to Almyros, on the Pagasetikos Gulf. This was the itinerary taken by merchants from the west.¹⁰³ Thessaly and Epiros were also linked across the Zygos pass above Metsovo and by other natural passages through the Pindos Mountains, including the defiles of Porta and Mouzaki. With its starting point at Preveza, one of these roads ascended the valley of the upper Acheloos and reached Trikkala and Larissa through the Porta pass. The route south then passed through Pharsala and Domokos to Lamia (Zetouni) and Hypate (Neai Patrai), leading through the pass of Thermopyle to the upper valley of the Kephisos and on to Leva-deia, Thebes, and Athens. Passes through the massif of Mount Oite made possible access to Salona and Galaxeidi on the Krissaion Gulf, while a further branch took the traveler through Lidoriki to the north shores of the Gulf of Corinth or to Naupaktos via Hagios Ioannes. Liutprand of Cremona, in the tenth century, traveled overland from Constantinople to Naupaktos in forty-nine days.¹⁰⁴

From Naupaktos, the road turned north again, along the east bank of Lake Trichonis to Ambrakia and Arta or up the coast to Nikopolis and further north from there to Sybota, Bouthroton, Hagioi Saranta, Panormos, Orikos, and Avlon.¹⁰⁵ This was the route followed, in the opposite direction, by those arriving via Kerkyra from the ports of Sicily and southern Italy (especially Otranto), who, after arriving at Nikopolis and then the Gulf of Corinth (either at Corinth or at Patras), wished to travel into the Peloponnese or central Greece or head further north. It was particularly heavily traveled when the Arabs were occupying Crete and Sicily and when the Bulgarians had severed communications along the Via Egnatia. The coastline of Boeotia and Phokis could be reached by ship and also overland in the ninth and tenth centuries, as we can see from saints' lives and particularly from the *Life of Hosios Loukas Steiriotēs*.¹⁰⁶ Later, in the mid-twelfth century, Benjamin of Tudela sailed from Otranto to Kerkyra in two days and then along the coast of the Ambracian Gulf to Naupaktos. The next stage of his journey took him overland to Krissa and thence to Corinth in three days; after this, it was a further three days to Thebes. Three more days brought him to Euboea, through whose interior he traveled on to Almyros and then Bessaina further to the north, where he took ship once more for Thessalonike.¹⁰⁷

¹⁰³ *La Géographie d'Edrisi*, trans. P.-A. Jaubert, 2 vols. (Paris, 1836–40; repr. Amsterdam, 1975), 2:292; cf. W. Heyd, *Histoire du commerce au Moyen Age*, 2 vols. (Leipzig, 1936), 1:245.

¹⁰⁴ *Liudprandi Relatio de Legatione Constantinopolitana*, in *Die Werke Liudprands von Cremona*, ed. J. Becker, 3d ed. (Leipzig, 1915), 175–212; A. Andréadès, "Sur Benjamin de Tudèle," *BZ* 36 (1929–30): 460.

¹⁰⁵ For the roads in Epiros, Aitolia, and Akarnania, see P. Soustal, *Tabula Imperii Byzantini*, vol. 3, *Nikopolis und Kephallenia* (Vienna, 1981), 88–96.

¹⁰⁶ N. Oikonomides, "The First Century of the Monastery of Hosios Loukas," *DOP* 46 (1992): 254; idem, "Via Egnatia."

¹⁰⁷ *The Itinerary of Benjamin of Tudela*, ed. A. Asher (London, 1840), 45–49.

Corinth, the most important administrative and commercial center of the Peloponnese, was the destination of the land routes from the north and also, because of its good harbors at Kenchreai and Lechaion, of the sea routes across the Aegean and the Ionian Sea. From Corinth, the route west to Achaia and Patras led along the coast; southward, the road passed through the urban centers of the interior into the central Peloponnese and thence to Sparta, the port of Gytheion, and Monemvasia. In the western Peloponnese, there were roads from Patras into the hinterland and others to the harbors down the coast as far as Methone and Korone in the southwest.

Asia Minor

Asia Minor was a place of vital significance in both military and economic terms. Its geographical position in relation to Constantinople, the Black Sea, the eastern Mediterranean, the Aegean, and Greece, and the way in which its network of communications was organized ensured that it formed part of the body of the empire. Lying as it did at the crossing of the great routes linking Asia with Europe and the lands around the Black Sea with the Mediterranean, it was the heart of the Byzantine world. The mountain ranges and plateaus of the interior and the heights barring north and south (the Pontos and Tauros massifs) made communications difficult, while the valleys of the rivers expedited them. In the Roman period, the major road axes had been horizontally orientated, from east to west, starting at the Euphrates and ending at the urban centers and ports of western Asia Minor: Smyrna, Ephesos, and Miletos. From there travelers could sail across the Aegean toward Rome.¹⁰⁸

With the founding of Constantinople, there was a change in this pattern of road axes across Asia Minor, linking the urban centers and facilitating the movements of Byzantine troops, imperial employees, merchants, and pilgrims. One main road led from northwest to southeast, while other axes headed east and south.

The appearance of the Arabs and the constant raids they carried out between the seventh and ninth centuries made communications in the Asia Minor hinterland difficult, and the Byzantines lost control of many road arteries, especially those within the area bounded by Caesarea, Ankyra, Amorion, and Dorylaion. On the Black Sea coast, however (with the cities of Herakleia, Amisos, Sinope, and Amastris), and along the west coast (Adramyttion, Smyrna, Ephesos, and Miletos), where the impact of the Arab raids was not felt, the road network continued to operate.¹⁰⁹ The military organization of Byzantium, with its imperial army made up of thematic army groups, was still able to march along a chain of fortified camps (*aplekta*) located at Malagina, Dorylaion, Kavorkin, Caesarea, Koloneia, and Dazimon.¹¹⁰ At this time, fortresses were built at strategic points from which the roads could be controlled. When the Arab wars ended, there was thus growth in the urban centers along the routes that the invaders had

¹⁰⁸ W. M. Ramsay, *Historical Geography of Asia Minor* (London, 1980), 74–75.

¹⁰⁹ H. Ahrweiler, “L’Asie Mineure et les invasions arabes (VIIe–IXe siècles),” *RH* 227 (1962): 1–32 (= *Etudes sur les structures administratives et sociales de Byzance* [London, 1971], art. 9).

¹¹⁰ *De ceremoniis aulae byzantinae*, ed. J. J. Reiske, 2 vols. (Bonn, 1829–30), 1:444–45; cf. V. Koutava-Delivoria, ‘Ο γεωγραφικός κόσμος Κωνσταντίνου του Πορφυρογεννήτου, vol. 2 (Athens, 1993), map 5.

followed: Amorion, Akroinon, Dorylaion, Euchaita, Synada, Charsianon, and Koloneia in Cappadocia.¹¹¹ In the Komnenian period, as the Byzantine-ruled area of Asia Minor shrank, the routes moved further west, while the road axis from the south linked the coast with the cities of the interior and the shores of the Black Sea.

One main road axis ran from northwest to southeast.¹¹² It set out from Chalcedon, where the public stables serving the imperial road were located,¹¹³ made its way to Nikomedeia, an important crossroads for communications with an imperial “hostel” (ξενοδοχεῖον),¹¹⁴ and Nicaea, where there was also an imperial “hostel”¹¹⁵ and a bridge that Justinian had reconstructed. The next stop was Leukai, followed by Ioulianopolis, the Siberis River, the village of Sykeon (with a bridge), Mnizos, and finally Ankyra. From the important communications hub of Ankyra, the road headed south to the east of Lake Tatta in the direction of Aspona, Parnassos, and Koloneia, then southwest to Tyana, Faustinopolis, Podandos, and the Cilician Gates. Then the traveler would ride on to Tarsos, Adana, Mopsuestia, and the Amanian Gates before coming to the shore of the Issikos Gulf and reaching Alexandretta and subsequently Antioch. Now, from that major urban center, he could turn south and make his way along the coast road through the great Mediterranean centers of Laodikeia, Tripolis, Berytus, Tyre, and ultimately the Holy Land.¹¹⁶

From Nicaea, the road led through the stations of Schinai and Leukai to the *aplekton* of Malagina and then headed south to Dorylaion, another important hub for communications. From there, a number of branch roads led west via Kotyaion to Pergamon and southeast to Amorion and thence to Ikonion. Dorylaion was also connected with Philomelion and then ran west to Synada, Apameia, and Laodikeia, where the road joined that from Magnesia to Philadelphia. The forces of the First Crusade marched from Nicaea to Dorylaion and thence to Synada, Apameia, Philomelion, and Ikonion on their way to Tarsos. Anna Komnene talks of a road from Bithynia to Philomelion in Phrygia.¹¹⁷ Ankyra was the focus for roads from the west, north, and south; from that important city, there was a route east to Sebasteia, Keltzene, Theodosiupolis (Erzerum), Kars, Anion, and then southeast to Tabriz. Caesarea was another important center for communications, standing as it did on the road linking Tarsos, Podandos, and Tyana before heading on to Sebasteia.¹¹⁸

¹¹¹ Ahrweiler, “L’Asie Mineure.”

¹¹² This important road, known as the “pilgrim’s road,” is mentioned by both the Jerusalem *Itinerarium* and the *Tabula Peutingeriana*. For its route in Roman times, see D. French, *Roman Roads and Milestones of Asia Minor*, fasc. 1, *The Pilgrim’s Road* (Oxford, 1981).

¹¹³ As recorded in the 10th century in the Life of St. Luke the Stylite: Vogt, “Vie de S. Luc le Stylite,” 42–43.

¹¹⁴ G. Zacos and A. Vegliery, *Byzantine Lead Seals*, 2 vols. (Basle–Berne, 1972–84), 1: no. 1995.

¹¹⁵ *Ibid.*, 2: no. 263.

¹¹⁶ For detailed references to the roads, see J. Lefort, “Les communications entre Constantinople et la Bithynie,” in Mango and Dagron, *Constantinople and Its Hinterland* (as above, note 2), 93–110; F. Hild and H. Hellenkemper, *Tabula Imperii Byzantini*, vol. 5, *Kilikien und Isaurien* (Vienna, 1990), 128–40.

¹¹⁷ *Alexiade*, 15.4.4, Leib ed., 3:201.

¹¹⁸ K. Belke and N. Mersich, *Tabula Imperii Byzantini*, vol. 7, *Phrygien und Pisidien* (Vienna, 1990), 139–60; F. Hild, *Die byzantinische Strassensystem in Kappadokien* (Vienna, 1977); F. Hild and M. Restle,

Another important road led west from Nicaea, passing south of the lake in the direction of Kios and then further south through Prousa, Apollonias, and Lopadion—a major intersection with a “hostel” and a bridge over the Ryndakos River—to Kyzikos. There was also a route from Nicaea around the north shore of the lake and along the road with two bridges by the Drakon River that Justinian had built, down to the coast and thence through Kios to Lopadion, Parion, Lampsakos and Abydos.¹¹⁹ We have detailed knowledge of the itinerary and halting places of this route from a letter of Theodore of Stoudios dating from 797, in which he describes his “journey of exile” (ἐξόριστον ὁδοιπορίαν) from the monastery of Kathara in Bithynia to Thessalonike. The journey from Kathara to Abydos took him fourteen days.¹²⁰ On the west coast, the road led from Abydos to Adramyttion and then led through Pergamon, Phokaia, Smyrna, Ephesos, and Miletos before running along the south coast in the direction of Patara, Myra, and Attaleia. In 1111 the caesar John Doukas took this route from Abydos to Ephesos before turning inland and advancing through Philadelphia and Laodikeia to Polybotos in Phrygia,¹²¹ and it was also used by the Frankish troops of Louis VII during the Second Crusade.¹²²

Among the most important routes was that running along the south coast, into which the roads from the interior fed so as to communicate with the sea routes via the coastal cities and ports: Patara, Myra, Attaleia, Kibyrra, Side, Anemourion, Seleukeia, Isauria, Korasion, Korykos, and Zephyrion (modern Mersin). From there the road turned inland to Tarsos, Adana, and Mopsuestia at the Amanian Gates before heading south to Antioch. Another road ran parallel to this one, from Zephyrion to Mallos and the harbor of Aigaiai (Ayas, Lajazzo). In these cities and ports, we know of the construction work—roads and bridges—for which Justinian was largely responsible: the building of a road from Seleukeia and Korykos in 521 under Justin I, bridges across the Kydnos River and straightening of its estuary at Tarsos, a bridge over the Saros River at Adana, and, further to the north, a bridge at Mopsuestia and construction of a road at Anazarbos. In 1137 John II Komnenos marched through the cities of Attaleia and Seleukeia, and from Zephyrion advanced through Tarsos and Adana to Mopsuestia.¹²³ There was a well-known and important road linking the coast with the interior: Pegolotti describes it as setting out from the port of Aigaiai on the Cilician coast and leading to Tabriz: along it were the halting places of Sisia (Kozan) and Kopitar, after which, through Rhondandos, the road went to Caesarea, Sebasteia, Keltzene (Erzincan), Theodosiopolis (Erzerum), and finally Tabriz.¹²⁴

Tabula Imperii Byzantini, vol. 2, *Kappadokien: Kappadokia, Charsianon, Sebasteia und Lykandos* (Vienna, 1981).

¹¹⁹ Lefort, “Les communications,” 215–18.

¹²⁰ Cheynet and Flusin, “Du monastère ta Kathara,” 201–6.

¹²¹ *Alexiade*, 11.5, Leib ed., 3:26–27.

¹²² R.-J. Lilie, *Handel und Politik zwischen dem byzantinischen Reich und den italienischen Kommunen Venedig, Pisa und Genua (1081–1204)* (Amsterdam, 1984), 251–52.

¹²³ Hild and Hellenkemper, *Kilikien und Isaurien*, 134–37.

¹²⁴ F. Balducci Pegolotti, *La pratica della mercatura*, ed. A. Evans (Cambridge, Mass., 1936), 28–29, 389–91.

The north Asia Minor road, along the south shores of the Black Sea, is described in the *Tabula Peutingeriana*. It was not an easy route, since the silting up of rivers and the terrain along the coast made travel by land a hard undertaking, in contrast to the comfortable, rapid, and safe sea voyage. To travel overland from Constantinople to Theodosiupolis (Erzerum) took twenty-five days, while the sea voyage, including a stage by road after Rizaion, required only a third of that time. Edrisi describes a route along the coast of Pontos from Trebizond to Constantinople in twenty-eight days, but this probably involved some stages by sea.¹²⁵ At Krateia (Flaviopolis) on the road from Constantinople to Ankyra, a branch led off to the north, crossing the Halys River to Andrapa, Phanaroia, Koloneia, and Theodosiupolis.

All the great rivers of Pontos—the Halys, the Iris, and the Akampsis—were navigable, permitting communications between the hinterland and the sea. From the ports, there were also roads to the urban centers of the interior: Herakleia in Pontos was linked to the road from Prousa to Krateia and Ankyra; one could travel overland from Amastris to Germia and Gangra; from Sinope and Sampsous, there was a road to Ama-seia, Komana, Sebasteia, Melitene, and Samosata; and the great road to Sebasteia and Theodosiupolis (Erzerum) was accessible from Trebizond.¹²⁶

*Communications by Sea: Infrastructure, Length of Journeys,
Periploi, Portulans, and Nautical Charts*

Like the overland routes, communications by sea used itineraries that had often become fixed and relied on the many years of experience of the seamen and on the infrastructure available along the voyage. But “since it is not in the nature of the waters to have established roads nor to show footprints and the traces of vehicles,”¹²⁷ these sea routes have to be marked out and reconstructed by studying scattered texts of widely varying origins, by identifying harbors and landing places (*skalai*), and by investigating shipwrecks and such traces of marketed commodities as have survived. From this evidence, it is possible not only to reconstruct the sea-lanes but also to calculate the relative value of the various places linked by the axes of communication by sea. In most cases, alternations in the routes and the reduced frequency of sailings were the result of political and military events, but they could also be associated with problems of state control over shipping and over the freedom of movement of independent merchants, with the question of reductions in the agricultural surplus, and with the inability of importing areas to absorb the products brought there.

We know that in good weather it was possible to cover a given distance by sea much more rapidly than overland; indeed, a day’s sea voyage was regarded as equivalent to a week’s march. Nonetheless, storms and head winds often caused long delays. The

¹²⁵ *La Géographie d’Edrisi*, 2: 394.

¹²⁶ A. Bryer and D. Winfield, *The Byzantine Monuments and Topography of the Pontos*, 2 vols. (Washington, D.C., 1985), 1:17–60.

¹²⁷ ἐπειδὴ τῶν ὑδάτων ἡ φύσις ὁδοὺς οὐκ ἔχει διωρισμένας, τύπους τε ποδῶν καὶ γραμμὰς ὁχημάτων: *Life of St. Stephen the Younger*, PG 100:1096D; cf. Auzépy, *La Vie d’Etienne le Jeune*, 109.

mare clausum—the prohibition on sea travel for a period of four months each year—was not always obeyed, especially in late Byzantine times.¹²⁸ The limited, incomplete, and fragmentary information found in the sources about the length of time a ship took to cover a given distance is equally relative: efforts to arrive at a typology for the duration of a voyage over a specific distance lack all the facts needed for reconstruction. The speed at which ships could sail and thus the length of the voyage would depend on what course had been chosen—hugging the coast or sailing the open sea—on weather conditions and the direction of the wind, on the length of stops at landing points and the number of overnight stays in harbor for repairs, the purchase of provisions, and trade, and also on the ratio between the number of oarsmen and the capacity of the ship, consequently on the economic scope for investments in shipping. In line with all of this, the sea voyage and its duration have to be interpreted within the broader framework of interaction and blending among the elements of time, the sea, and society.¹²⁹

Some sources make clear statements about the distance between two points and the time needed to cover it: Theodore of Stoudios, for example, tells us that the distance from Lemnos to Cape Kanastro on the Pallene promontory is 240 km and that the voyage took twelve hours.¹³⁰ Other sources reveal the difference that there could be between the outward and the return voyage: Mark the Deacon, traveling in the service of Porphyrios, bishop of Gaza, in the fifth century, took twenty days to sail from Askalon to Constantinople, but only half that time on the way home.¹³¹

From the *Life of St. Gregory of Akragas* (died 592), we learn that the saint took ship and sailed first to Carthage and then to Tripolis in Phoenicia in twenty days.¹³² Thomas Magistros describes the journey he made by merchant ship between 1314 and 1318 in his *Concerning a Voyage from Thessalonike to Byzantium and back to Thessalonike* (Περὶ τοῦ ἐς Βυζάντιον ἐκ Θεσσαλονίκης ἀνάπλου καὶ αὐθις ἐς αὐτήν κατάπλου): he left Thessalonike on 1 October and reached Constantinople via Lemnos, Imbros, Samothrace, Tenedos, the Hellespont, and the Propontis in twenty days. The return journey, in midwinter, took forty-five days and involved twenty-four days of enforced immobility, at first because of a calm and then because of bad weather.¹³³ St. Sabas and a delegation of Athonite fathers set out from the harbor of the Great Lavra on Mount Athos for Con-

¹²⁸ Jones, *Later Roman Empire*, 2:843; J. Rougé, *Recherches sur l'organisation du commerce maritime en Méditerranée sous l'Empire romain* (Paris, 1966), 31–35; G. Dagron, “Das Firmament soll christlich werden: Zu zwei Seefahrtskalendern des 10. Jahrhunderts,” in *Fest und Alltag in Byzanz*, ed. G. Prinzing and D. Simon (Munich, 1990), 145–46; and see below, 80.

¹²⁹ H. Antoniadis-Bibicou, *Etudes d'histoire maritime de Byzance: A propos du “thème des Caravisiens”* (Paris, 1966), 27–29; A. Udovitch, “Time, the Sea and Society: Duration of Commercial Voyages on the Southern Shore of the Mediterranean during the High Middle Ages,” in *La navigazione mediterranea nell'alto medioevo* (Spoleto, 1978), 1:503–46.

¹³⁰ Cheynet and Flusin, “Du monastère ta kathara,” 198, 202.

¹³¹ *Vie de Porphyre, évêque de Gaza*, ed. H. Grégoire and M.-A. Kugener (Paris, 1930), 6, 26–27, 34, 37, 55, 57.

¹³² PG 98:549–716; cf. H. Magoulas, “The Lives of the Saints as Sources of Data for the History of Commerce in the Byzantine Empire in the VIth and VIIth Cent.,” *Κληρονομία* 3 (1971): 313.

¹³³ G. Makris, *Studien zur spätbyzantinischen Schifffahrt* (Genoa, 1988), 225–27; Karpozilos, “Ταξιδιωτικές περιγραφές,” 524–29; cf. Makris, “Ships,” *EHB* 95.

stantinople on 23 March 1342 and, with favorable winds, sailed through the islands of the Aegean, the Hellespont, and the Propontis to the harbor of the capital in just three days.¹³⁴

Documents dating from the second half of the fourteenth century and concerning the voyages of Genoese ships are indicative of the time it could take to cover a specific route by sea.¹³⁵ These ships sailed close to the coast, rarely venturing out into the open sea except in emergencies. The day's voyage would begin at dawn, and at dusk the ship would take refuge in a bay where the night would be spent; they rarely sailed in darkness. In 1351, one of these Genoese galleys covered an average distance of 65 km in a day, and another in 1369 made 76 km in a day. The voyage from Alexandria to Genoa took twenty-three days, or twenty-nine days in the case of another galley. A distance of 176 km covered in a single day was regarded as a noteworthy exception: another ship took two days and nights at sea to cover the 80 km from Ios to Melos in bad weather. The lengthy stops in bays and at landing points that might be needed and the possibility of encounters with pirates or enemy ships made the duration of voyages unpredictable.

The Venetian galley convoys called *muda* set out from Venice in late July and sailed to Constantinople via Methone and Euboea, dropping anchor in the Byzantine capital for at least two weeks on the outward voyage and for a few days on the way home. After Constantinople, they would call at the harbors around the Black Sea, and in particular at Tana, returning from the Sea of Azov via Trebizond or Sinope. Including the voyage home to Venice, it has been calculated that this voyage would have lasted some six months, bringing the galleys home in December.¹³⁶

J. Koder's study¹³⁷ of navigation in the Aegean and of the texts that preserve the distances and durations of journeys by sea in the late Middle Ages led him to the following conclusions: the port of origin of the vessel or its crew was not important, but the type of ship and the competence of the captain and seamen were factors of great significance; the average daily distance covered was at least 30 km and might be as much as 50 km; ships did not necessarily remain in harbor at particular times of the year, since we know that George Sphrantzes traveled every month all year round; we should not forget, however, that the use of the compass had changed the conditions of sailing.

Although our studies of shipwrecks have not yet come up with answers to some important questions, we can draw some conclusions about the mechanisms of traffic at sea.¹³⁸ In terms of statistics, it has been observed that twice as many shipwrecks date

¹³⁴ Life of St. Sabas the Younger, ed. D. Tsamis, in Φιλοθέου Κωνσταντινουπόλεως τοῦ Κοκκίνου Ἀγιολογικὰ Ἔργα, A', Θεσσαλονικεῖς Ἅγιοι (Thessalonike, 1985), 292.

¹³⁵ M. Balard, "Escalaes génoises sur les routes de l'Orient méditerranéen au XIVE siècle," *Recueils de la Société Jean Bodin* 32 (1974): 234–64.

¹³⁶ F. Thiriet, *La Romanie vénitienne au moyen-âge* (Paris, 1959), 343.

¹³⁷ "Νησιώτικη επικοινωνία στο Αιγαίο κατά τον όψιμο Μεσαίωνα," in Ἡ Ἐπικοινωνία στό Βυζάντιο (Athens, 1993), 445–55.

¹³⁸ A. J. Parker, *Ancient Shipwrecks in the Mediterranean and the Roman Provinces*, (Oxford, 1992); F. van Doorninck, Jr., "Byzantine Shipwrecks," *EHB*.

from the sixth century as from the fifth, with the number falling away in the seventh century and no shipwrecks at all from the eighth century having been found.¹³⁹ Shipwrecks make their appearance again in the ninth and the early tenth century. The discovery of shipwrecks of different periods along the same routes—indeed, often in the same positions—is indicative of the degree to which seamen stuck to predetermined routes. One typical example is that of a thirteenth-century wreck at Kastellorizo,¹⁴⁰ an island on the sea-lane that crossed the eastern Mediterranean and linked Cyprus and Rhodes with the Aegean. Shipwrecks of various periods have been identified along this route off the north coast of Cyprus, at Kyreneia, at Cape Chelidonia, on the Asia Minor coast facing Kastellorizo, and at Yassi-Ada near Kos.

It is often difficult to determine the port of origin and destination of the sunken ships by studying their cargoes, and especially the amphoras they were carrying, because these vessels often came from different places. The example of the sixth-century shipwreck at Cefalù off western Sicily is indicative in this respect: the vessel was transporting amphoras from Antioch, the north Aegean, and the Black Sea, along with boxes from Tunisia.¹⁴¹ This variety of origin seems to suggest that the ship had been sailing along the coast, buying—and perhaps selling—from port to port. This phenomenon can also be seen in texts such as the *Katarche* or *Horoskopion* of the year 475,¹⁴² which records details of the voyage and the stops made at various points: the vessel had taken on a cargo of camels in Cyrenaica, then loaded additional cargo consisting of precious fabrics and silver goods in Alexandria before heading out into the open sea and setting course for Athens. On the return journey, it made no stops.

The *periploi* of the ancient Greeks, texts recording sea routes and distances in miles or stadia, continued to be produced in later times.¹⁴³ The anonymous *Periplus of the Euxine Sea* (Περίπλους τοῦ Εὐξεινίου Πόντου) must have been composed in the sixth century,¹⁴⁴ while the anonymous and incomplete *Measurement in Stadia of the Great Sea* (Σταδιασμός τῆς Μεγάλης Θαλάσσης), compiled in the early years of the empire, records distances in both stadia and miles and has survived in the form of a tenth-century manuscript in a codex in Madrid.¹⁴⁵ Apart from distances, it also gives instructions for

¹³⁹ S. J. B. Barnish, "The Transformation of Classical Cities and the Pirenne Debate," *JRA* 2 (1989): 397 n. 96.

¹⁴⁰ G. Philotheou and M. Michailidou, "Plats byzantins provenant d'une épave près de Castellorizo," *BCH*, suppl. 18 (1989): 173–76; and "Βυζαντινά πινάκια από το φορτίο ναυαγισμένου πλοίου κοντά στο Καστελλόριζο," *ΑΔ* 41.1 (1986) [1991]: 271–330; Parker, *Shipwrecks*, no. 538.

¹⁴¹ Parker, *Shipwrecks*, no. 292.

¹⁴² G. Dagron and J. Rougé, "Trois horoscopes de voyages en mer," *REB* 40 (1982): 126–27.

¹⁴³ Apart from the sea routes recorded in the *Itinerarium* of Antoninus, we also know of the handbook for sailors compiled by Markianos of Herakleia in Pontos under the title *Periplus mari exteri*, which may have been accompanied by a map based on the Ptolemaic coordinates; Müller, *Geographi Graeci Minores* (Hildesheim, 1965), 1:515–62; Dilke, "Itineraries," 237.

¹⁴⁴ *Geographi Graeci Minores*, 1:424–26. For the chronology of "Anonymous," see A. Diller, *The Tradition of the Minor Greek Geographers* (Lancaster, Pa., 1952), 113; in the view of A. Silberman, "Arien *Périple du Pont Euxin*: Essai d'interprétation et d'évaluation des données historiques et géographiques," *Aufstieg und Niedergang der römischen Welt*, II.34.1 (1993): 276–311, "Anonymous" is a 5th-century work.

¹⁴⁵ *Geographi Graeci Minores*, 1:427–514; Dilke, "Itineraries," 237; H. Ahrweiler, *Byzance et la Mer* (Paris, 1966), 164.

navigation, descriptions of coastlines, harbors, and sea depths, identifying, among other things, reefs and places where supplies might be obtained.

The *De cerimoniis* of Constantine VII Porphyrogennetos has preserved the names of stops on the sea route made by the imperial fleet and the distances between them in miles. The *Stadiodromikon*, as this text is called, is interpolated at the end of the list of ships being prepared to take part in the ultimately unsuccessful campaign of 949 to recapture Crete from the Arabs.¹⁴⁶ The texts in the colloquial language dating from the same period and containing the distilled maritime experience of the *strategos* of the Kibyrrhaiotai and of his counterpart of the Mardaitai¹⁴⁷ are connected with the recommendations of the *Taktika* and the historians of the Macedonian dynasty: Leo VI exhorted his *strategoi* to acquire expert knowledge and experience of the sea so as to be able to predict changes in the weather. The *Taktika* of Nikephoros Ouranos recommends that each *strategos*, and each ship, ought to have the services of experienced pilots who were familiar with the winds, the reefs and shallows, the land around which the ship was sailing, the islands, and the harbors.¹⁴⁸ These texts, and the book to which Constantine VII refers in connection with “the things that seafaring men observe”¹⁴⁹ and that he regards as essential on any campaign, demonstrate that the oral tradition had survived and that the seagoing experience passed down by word of mouth was of primary importance in navigation.

It has been stressed that the descriptive texts—the *periploi*—were of great significance in the preparation of maps; nonetheless, none of the texts mentioned above contains any maps, while all make much of the importance of the experience and practical knowledge passed down among seafarers. As O. Dilke notes, it is only from the literary sources that we could extract any evidence as to the existence of maps in Byzantium.¹⁵⁰

Of particular interest in connection with this problem is the *Alexiad* of Anna Komnene,¹⁵¹ which narrates the sea battle fought between the Byzantine fleet and the Normans in the Adriatic in 1108. Alexios, having set up his headquarters in Thessalonike and seeing that the *megas doux* Isaac Kontostephanos had positioned his fleet wrongly, in such a way that the south winds were hampering its movements while favoring those of the enemy, drew a map of the coastline of Longobardia and Illyricum on which he marked the harbors in each place. He dispatched this to Kontostephanos, accompanying it with a letter explaining where the fleet was to be based and from which point it could sail, with a favorable wind, against the enemy. This piece of information about the way in which Alexios—who alone had such knowledge, of which his admiral was

¹⁴⁶ G. Huxley, “A Porphyrogenitan Portulan,” *GRBS* 17 (1976): 295–300.

¹⁴⁷ Sp. Lambros, “Τρία κείμενα συμβάλλοντα εἰς τὴν ἱστορίαν τοῦ ναυτικοῦ παρὰ Βυζαντινοῖς,” *Νέος Ἑλλ.* (1912): 162–77; Ahrweiler, *Byzance et la Mer*, 399–400; Dagron, “Zwei Seefahrtskalendern,” 145–46.

¹⁴⁸ Leo VI, *Taktika*, PG 107:671–1128; A. Dain, *Naumachica* (Paris, 1943), 93.

¹⁴⁹ “Ὅσα παρατηροῦνται οἱ πλευστικοί,” *De cer.*, 1:467.

¹⁵⁰ O. A. W. Dilke, “Cartography in the Byzantine Empire,” in *The History of Cartography* (as above, note 54), 1:258, no. 5.

¹⁵¹ *Alexiade*, 3.4, Leib ed., 3:113.

not in possession—"delineated" the coastline and identified its harbors deserves particular attention. It can be hypothesized that Alexios possessed sketches of the coast of the Adriatic which he copied, that there were experienced sailors in his entourage, or that he had access to descriptive texts providing detailed information. We might also speculate as to whether this drawing of the coastline was among those that survived and were later assembled by the cartographers of the West so as to produce, in the late thirteenth century, the first known manuscript naval chart.

Various ideas have been put forward as to the origins of the descriptive texts called portulans and of the naval charts, the earliest of which is believed to be the manuscript map of the Mediterranean known as the "Pisan map" and dating from the late thirteenth century.¹⁵² One of the most likely theories is that the naval charts of the West were put together from maps of smaller sections of the Mediterranean and the Black Sea. On these maps, coastlines were depicted and harbors marked by means of triangulation in relation to the directions of the wind. Such cartographic work presupposed that it was possible to work out the correct orientation and determine distances, and this could only be done with instruments of measurement and careful observation.¹⁵³ It is interesting to note that the earliest naval chart coincides chronologically with the oldest known descriptive text (portulan) from the West, the mid-thirteenth-century *Compasso da navigare*,¹⁵⁴ and also with the introduction of the compass. However, the recent publication of a portulan mentioning a naval chart produced in Pisa around 1200 necessitates the revision backward, by about a century, of these dates.¹⁵⁵

After the late thirteenth century, the cartographic studios of the great trading cities of the West—Venice, Genoa, Pisa, and Majorca—turned out naval charts to meet the needs of their own merchant fleets. Apart from the "Pisan map" already mentioned, which was probably made by a Genoese, the most important of these early naval charts are Italian and Catalan, and they depict both the Mediterranean and the Black Sea. Among others, one could cite the "Tammar Luxor" map (13th century) and the maps drawn by Petrus Vesconte (1313, 1321), Francesco Pizigano (1367, 1373), G. Soleri (ca. 1385), A. de Virga (1409), J. de Giroladis (1422), G. de Vallsecha (1447), A. Bianco (1436, 1448), and A. Benincasa (1461, 1470).¹⁵⁶

On the maps of Petrus Vesconte, drawn in 1313, we can trace the course taken by the ships from Genoa to the trading ports and stations already familiar to us from the descriptive texts (portulans). Along the Tyrrhenian coast as far as the Straits of Otranto, the ports of Gaeta, Neapolis, Salerno, Messina, and Croton are marked in red, and the bays in which ships could seek refuge are also indicated. Beyond Otranto, the course

¹⁵² M. Mollat du Jourdin and M. de la Roncière, *Les portulans: Cartes marines du XIIIe au XVIIe siècle* (Paris, 1984), no. I, 198.

¹⁵³ T. Campbell, "Portolan Charts from the Late Thirteenth Century to 1500," in *The History of Cartography* (as above, note 54), 1:371–463; Jourdin and de la Roncière, *Les portulans*, 11–20.

¹⁵⁴ B. R. Motzo, "Il compasso da navigare, opera italiana della metà del secolo XIII," *Annali della Facoltà di Lettere e Filosofia della Università di Cagliari* 8 (1947): 1–137.

¹⁵⁵ P. G. Dalché, *Carte marine et portulan au XIIe siècle: Le liber de existencia riveriarum et forma maris nostri Mediterranei* (Pise, circa 1200) (Rome, 1995).

¹⁵⁶ A. Avramea, "Ἡ Χαρτογράφηση τοῦ παράλιου χώρου," in *Ἑλληνικὴ Ἐμπορικὴ Ναυτιλία (1453–1850)*, ed. S. Papadopoulos (Athens, 1972), 179–230.

leads from island to island, the most important of which Vesconte marked in color: Euboea, Crete, Rhodes, Chios, and Mytilene. Also included are the smaller islands that lay along the sea-lanes, including Velopoula and Gerakounia (Phalkonera) on the way from Monemvasia to Melos.¹⁵⁷

Sea-Lanes

Since the foundation of Constantinople, all the sea-lanes had led to it. The great maritime axis from the Cimmerian Bosphoros across the Black Sea led through the Bosphoros to Constantinople and then through Propontis and the Straits of the Hellespont out into the eastern, central, and western Mediterranean.

The harbors along the Propontis—or the “lake of Constantinople,” as it has been called¹⁵⁸—linked the capital with the nearby provinces of Thrace and Asia Minor, Selymbria, Herakleia (Perinthos), and Rhaidestos on the north shore were, with Kallipolis on the Thracian peninsula, the most important ports of access to the Thracian hinterland.

Communications by sea with Bithynia took place along a number of routes.¹⁵⁹ There were frequent sailings from Constantinople to Kyzikos and Lopadion (by way of the Ryndakos River) and to the ports of the south shore of the Gulf of Kios (Katabolos). According to a hagiographical text, it took four days to sail from Chalke to Kios against a strong head wind.¹⁶⁰ The Bithynian port most frequently used was Pylai (now Karakilis, to the east of Yalova). Another route linked Constantinople with Helenopolis, founded by Constantine the Great to ease communications between Bithynia and the capital.¹⁶¹ Nearby, Alexios I Komnenos founded the fortress of Kibotos to protect the route from Aigialoi on the Propontis into Asia Minor. Prainetos and Eribolos were also the end ports of sea routes.

Communications through the Bosphoros between Constantinople and the ports of the Black Sea, especially those on the west and south coasts, were easy. The Byzantine emperors frequently traveled by sea from the capital to visit the nearby ports and destinations further away. Basil I sailed to Rhegion in order to inspect the bridge he was having repaired,¹⁶² and in 680 Constantine IV visited Mesembria by sea.¹⁶³ Pylai in Bithynia was the landing place most frequently used by the emperors.

The North-South Axis

The important north-south sea route linked Constantinople with the eastern Mediterranean, Egypt, and the coast of North Africa. The route ran from Herakleia on the

¹⁵⁷ Jourdin and de la Roncière, *Les portulans*, nos. 2–4, 198–99.

¹⁵⁸ H. Ahrweiler, “L’escale dans le monde byzantin,” *Recueils de la Société Jean Bodin* 32 (1974): 167.

¹⁵⁹ Lefort, “Les communications,” 209–15.

¹⁶⁰ Βίος Νικηφόρου Μηδικίου, ed. F. Halkin, *AB* 78 (1960): 424; cf. E. Kountoura-Galaki, “Γιὰ τὸν κοινωνικὸ καταμερισμὸ τῶν ταξιδιῶν τῶν ἀγίων,” in *Ἡ Ἑπικοινωνία στὸ Βυζάντιο* (as above, note 137), 506.

¹⁶¹ C. Mango, “The Empress Helena, Helenopolis, Pylae,” *TM* 12 (1994): 143–58.

¹⁶² *DAI*, 51.

¹⁶³ Theophanes, 1:358.

north coast of the Propontis to the Straits and from the customs post at Abydos out to the island of Tenedos, the sea fortress that protected the entrance to the Propontis. From Tenedos, the route headed south, round the Aegean islands (Mytilene, Chios, Samos, and Kos) to Rhodes, one of the largest harbors in the eastern Mediterranean and the point where the north-south and east-west sea-lanes across the Mediterranean met.¹⁶⁴ From Rhodes, ships could sail west to Crete or east to Cyprus, in its privileged position between the ports of Syria, Palestine, Egypt, and the south coast of Asia Minor. Ships leaving the large islands of Rhodes and Cyprus then sailed south across the open sea to Alexandria. Alternatively, they could continue east from Rhodes, along the south coast of Asia Minor, past Pamphylia to Attaleia, Seleukeia in Cilicia, Korykos, and the harbor of Aigaiai (Lajazzo), and thence to the bay of Issos (Alexandretta) and St. Symeon for Antioch.¹⁶⁵ The route south now lay along the coast of Syria and Palestine, with its important commercial harbors of Laodikeia, Tripolis, Berytos, Sidon, Tyre, Akra, Caesarea, Gaza, and Pelousion. At Pelousion the sea route intersected with the road from Klysma, which linked the Red Sea ports with the Mediterranean and then ran west toward Alexandria and the North African coast.¹⁶⁶

We know from the sources that traffic along this important route was dense, especially in the centuries before the Arab invasion of the seventh century and the loss of the southern provinces. The *Miracles of St. Artemios*, of the seventh century, refer to merchant ships plying between Rhodes and Constantinople,¹⁶⁷ a distance that Porphyrios of Gaza sailed in five days. The Arab writer Ibn Hordadbeh, in the ninth century, gives an account of the voyage by sea from Constantinople to Pelousion in Egypt.¹⁶⁸ In his *Stadiodromikon*, Constantine VII describes the route, 792 nautical miles, from Constantinople to Crete via Mytilene, Chios, Samos, Phournoi, Naxos, Ios, Thera, and Christiana;¹⁶⁹ at a later date, Benjamin of Tudela gives in detail the distances from island to island on the way from Constantinople to Cyprus: it was two days from Constantinople to Rhaidestos, two days from Rhaidestos to Kallipolis, two days from Kilia (Koila?) to Mytilene, three days from Mytilene to Chios, two days from Chios to Samos, three days from Samos to Rhodes, and four days from Rhodes to Cyprus.¹⁷⁰ The Byzantine fleet took three days to sail from Attaleia to Ascalon, while from Cyprus to Tripolis in Syria was a two days' journey, according to Edrisi.¹⁷¹ Nikephoros Gregoras states that a sail-equipped merchant ship could cover the distance between Constantinople and Rhodes in seven days, between Rhodes and Alexandria in five, and between Cyprus and Crete in nine.¹⁷²

¹⁶⁴ Ahrweiler, "L'escala," 170–71.

¹⁶⁵ E. Malamut, *Les îles de l'Empire byzantin, VIIIe–XIIe siècles* (Paris, 1988), 536–41.

¹⁶⁶ Magoulias, "The Lives of Saints," 303–6.

¹⁶⁷ *Miracula Artemii* in *Varia graeca sacra*, ed. A. Papadopoulos-Kerameus (St. Petersburg, 1909).

¹⁶⁸ T. Lewicki, "Les voies maritimes de la Méditerranée dans le haut moyen-âge d'après les sources arabes," in *La Navigazione mediterranea nell'alto medioevo* (as above, note 129), 452.

¹⁶⁹ Huxley, "Portulan," 295.

¹⁷⁰ *Itinerary of Benjamin of Tudela*, 56–57.

¹⁷¹ *Géographie d'Edrisi*, 130.

¹⁷² *Nicephori Gregorae Byzantina historia*, ed. I. Schopen and I. Bekker (Bonn, 1829–55), 24.6, 7.

Sailing West

A dense network of sea-lanes led west from Constantinople and the western shores of Asia Minor. The great south axis of trade across the Mediterranean led west from the coast of Asia Minor and the southern provinces (Syria, Palestine, and Egypt) in the direction of North Africa, Carthage, Sicily, Italy, Gaul, and ultimately Britain. The testimonies of pottery,¹⁷³ coins,¹⁷⁴ shipwrecks,¹⁷⁵ and hagiographical texts¹⁷⁶ are proof that traffic along this axis was dense down to the seventh century. From the capital, the route led out through the Propontis and the harbors of the Hellespont, Parion, Lampsakos, Abydos, and Elaious into the Aegean; ships sailed to Lemnos and from there toward the peninsula of Chalkidike, along the west coast of which they would approach Thessalonike. There was a long tradition behind this itinerary, described in a letter of Theodore of Stoudios dating from 797. From the exit of the Straits at Elaious to Lemnos was some 80 or 90 km, which, when the winds were favorable, could be covered in nine hours. From Lemnos to Kanastron in Pallene was a further thirteen hours.¹⁷⁷ In the ninth century, St. Gregory of Dekapolis sailed from Ephesos to Prokonnesos and then on to Ainos and Christoupolis.¹⁷⁸ As already noted, St. Sabas the Younger sailed from the landing stage of the Great Lavra monastery on Athos to Constantinople in three days, with a tail wind and a calm sea.¹⁷⁹

The island chain of the Aegean linked Constantinople and the Asia Minor coast along routes that varied according to the ship's ultimate destination. Navigation was difficult; Constantine VII describes the Aegean as "hard to sail and difficult to cross, with long waves like mountains."¹⁸⁰ From Lemnos, one of the best-known routes turned southwest and led through the North Sporades (Skiathos, Skopelos, and Paparethos). John Kameniates describes this route: "Called *Diadromoi* ["corridors"] by seafaring men, [it] has two islands on either side facing each other and running around the sea in the middle."¹⁸¹ These were the Liadromia and Chelidromia, also referred to as *Diadromoi* by Sylvester Syropoulos,¹⁸² and there was a harbor on the island of Gymno-

¹⁷³ P. Arthur, "Amphorae and the Byzantine World," *BCH*, suppl. 13 (1986): 655–60.

¹⁷⁴ J. Lafaurie and C. Morrisson, "La pénétration des monnaies byzantines en Gaule mérovingienne et visigothique du VI^e au VIII^e s.," *RN*, ser. 6, 29 (1987): 38–98.

¹⁷⁵ Parker, *Shipwrecks*, no. 446.

¹⁷⁶ *Vie de Jean de Chypre dit l'Aumonier*, ed. A.-J. Festugière (Paris, 1974), 353–54, 452–54; *Miracula Artemii*, 39.

¹⁷⁷ Cheynet and Flusin, "Du monastère ta Kathara," 204–5.

¹⁷⁸ Dvornik, *Vie de Saint Grégoire le Décapolite*, 53–54.

¹⁷⁹ *Ibid.*, 35.

¹⁸⁰ βαρύπλουν ἐστὶ καὶ δυσπέρατον καὶ κύματα μακρὰ καὶ ὄρεσιν εἰκότα . . . : *De Thematibus*, 17.30–34.

¹⁸¹ Διαδρόμους παρὰ τῶν ναυτιλλομένων ὀνομαζόμενον, δύο μὲν νήσους ἀμφιμήκεις ἐξ ἐναντίας ἀλλήλων μέσον δὲ τούτων . . . τὴν θάλασσαν περιθέουσαν . . . : *Ioannis Caminiatae De expugnatione Thessalonicae*, 67.7; see K. Amantos, "Παρατηρήσεις τινὲς εἰς τὴν Μεσαιωνικὴν Γεωγραφίαν," *ΕΕΒΣ* 1 (1924): 53–54.

¹⁸² V. Laurent, *Les mémoires du grand ecclésiarque de l'Église de Constantinople Sylvestre Syropoulos* (Paris, 1971), 540–41.

pelagesion (modern Pelagonesi or Kyra Panagia), where a twelfth-century shipwreck has been identified.¹⁸³ Sissinios, commander of the fleet of the Karabesianoï, sailed from Skiathos to Thessalonike with favorable winds, setting out one Monday night and arriving at seven o'clock on Wednesday morning.¹⁸⁴

The routes that ships would take through the Cyclades differed depending on their destination. Indications of the traffic among the islands can be gained from the rough inscriptions at Grammata Bay on Syros, which record the names and places of origin of the sailors who stopped there.¹⁸⁵ On Tenos, too, tenth-century inscriptions have been identified, noting, among other things, the passages of a bishop of Knidos, an Athenian goldsmith, and a Paphlagonian.¹⁸⁶ After the capture of Thessalonike, the Arab fleet sailed through the Cyclades on its way to Tripolis in Syria, passing Naxos, Crete, and Paphos on Cyprus. The ambassador of Leo VI stopped at Ios and Paros en route for Crete, but in 960 Nikephoros Phocas and his fleet could find no pilot to guide them to that island: the route had been forgotten.¹⁸⁷

Navigation in the Adriatic continued in the seventh and eighth centuries, with journeys becoming more frequent in the ninth century as the empire stepped up its defenses in the West.¹⁸⁸ Links with the ports of southern Italy—Brindisi and Taranto—slackened, and after the ninth century Hydrous (Otranto) took over the position of primacy and became the most important harbor for communications between the empire and southern Italy. The route from Otranto to Bouthrotos, Kerkyra, and Leukas was that taken by most travelers.¹⁸⁹

From West to East

Even in the early Christian centuries, pilgrims set out from the harbors of the western Mediterranean—in Spain, Gaul, and Italy—to make the journey to the Holy Land and the monastic communities of Egypt and Palestine. Their route took them through the ports of the southern Peloponnese, the Cyclades, Rhodes, and Cyprus before they approached their destination in the Holy Land. In the fourth century, St. Paula passed through the Straits of Messina and stopped at Methone before rounding Cape Maleas to Kythera and sailing on through the Cyclades. Rhodes and Cyprus were the last stops

¹⁸³ E. Ioannidaki-Dostoglou, "Les vases de l'épave byzantine de Pélagonnèse-Halonèse," *BCH*, suppl. 18 (1989): 157–71; Parker, *Shipwrecks*, no. 796.

¹⁸⁴ Lemerle, *Miracles de saint Démétrius*, 2:157.

¹⁸⁵ G. Kiourtzian, *Recueil des inscriptions grecques chrétiennes des Cyclades. De la fin du IIIe au VIIe siècle après J.-C.* (Paris, 2000), 137–200.

¹⁸⁶ D. Feissel, "Inscriptions byzantines de Ténos," *BCH* 104 (1980): 477–518.

¹⁸⁷ Malamut, *Les îles*, 545. For navigation in the Aegean during the period of Arab rule in Crete, see V. Christides, *The Conquest of Crete by the Arabs (ca. 824): A Turning Point in the Struggle between Byzantium and Islam* (Athens, 1984), 157–72.

¹⁸⁸ J. Ferluga, "Navigation et commerce dans l'Adriatique aux VIIe et VIIIe siècles," *ByzF* 12 (1987): 39–51.

¹⁸⁹ V. von Falkenhausen, "Réseaux routiers et ports dans l'Italie méridionale byzantine (VIe–Xe s.)," in *Ἡ Καθημερινή Ζωή στο Βυζάντιο* (Athens, 1989), 711–31.

on her voyage to the Holy Land.¹⁹⁰ The pilgrim Willibald traveled from Rome and Syracuse to Monemvasia in 722 and then sailed on to the Holy Land via Kea, Samos, and Cyprus.¹⁹¹ The flow of pilgrims from West to East never stopped, and indeed grew in strength after the time of the Crusades.¹⁹²

The eleventh century saw the beginning of a new period in the history of sea travel, with the pronounced presence in the Mediterranean, and later in the Black Sea, of the fleets of the great western naval powers. The economic progress of the West was the signal for the important Italian cities of Venice, Genoa, and Pisa to turn their attention to the coast of Byzantium and the Arab world. Now the axis of communications began to operate in reverse, and the direction of trade was from west to east. The principal axes lay through the Adriatic, along the north coast of Africa, into the eastern Mediterranean and the Aegean and then to the Black Sea via the Straits.

The Venetian ships hugged the east coast of the Adriatic (Venice, Zara, Spalato, and Ragusa) to Dyrrachion and then the chain of Byzantine islands and ports in the Ionian Sea (Kerkyra, Nikopolis, Leukas, Kephallenia, and Zakynthos). They sailed around the western and southern coasts of the Peloponnese, calling at Methone and Korone, before passing Kythera and Cape Maleas, and headed north through the Cyclades to the coast of Asia Minor and Constantinople. Another route to Constantinople lay through the Gulf of Corinth to Corinth itself, then around the coast of Attica before heading north: Euboea, Halmyros, Kitros, Thessalonike, Christoupolis, the Straits of the Hellespont, Rhaidestos, Herakleia, and Constantinople.

There was a sea-lane south to Rhodes and the southern coastline of Asia Minor, leading to Attaleia and also to Cyprus, with Syria as the ultimate destination: Antioch, Tripolis, Akra, and Tyre. This route was often used as a link between Venice and Crete via the Peloponnese, and from Crete on to Alexandria and Syria.¹⁹³

Genoese vessels destined for the empire set out from their home port along the west coast of Italy, passing through the Straits of Messina and then following the coastline of Calabria and Apulia. When they reached Otranto, they would turn across the strait to Kerkyra and then make for Kythera via the islands of Leukas, Kephallenia, Zakynthos, Sapienza, Venetiko, and Elaphonnesos (Cervi). Two different routes might be taken from Cape Malea onward: one headed for Monemvasia, past the islets of Velopoula and Gerakounia (Phalkonera) and then out into the Aegean (Chios and Mytilene) before reaching Tenedos and the Propontis. The other turned south to Cyprus and Egypt via Melos, Naxos, Amorgos or Astypalaia, and Rhodes.

After 1261, these routes extended to include the Black Sea. From Pera, the ships would follow the west coast of the Black Sea to the Crimea, Soldaia, and Caffa (Theodosia). Via the Cimmerian Bosphoros, Caffa was linked to Tana, at the mouth of the Tanais River, and a land route led off into central Asia. Another route, along the south

¹⁹⁰ *Hieronymi, Ep.* 108, in *Saint Jérôme, Lettres*, ed. J. Labourt (Paris, 1955), 5:165.

¹⁹¹ T. Tobler and A. Mollinier, *Itinera Hierosolymitana* (Geneva, 1879), 1:254–56.

¹⁹² Malamut, *Les îles*, 547–52.

¹⁹³ Lilie, *Handel und Politik*, 243–53.

shore of the Black Sea, would take sailors to Trebizond and then to the Cimmerian Bosphoros at Kers. The Genoese route south from Pera led through the islands of the Aegean and along its coast: Adramyttion, Phokaia, Smyrna, Chios, Rhodes, and ultimately Egypt.¹⁹⁴

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¹⁹⁴ M. Balard, *La Romanie génoise: XIIe–début du XVe siècle*, 2 vols. (Genoa–Rome, 1978), 2:849–68.

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Ships

George Makris

The most striking characteristic about the involvement of the Byzantines with the sea is its continuity. Discontinuity or even disruption, in conjunction with upheavals on a wider scale, is to be noted only where technologically advanced ships are concerned. Today we possess reliable works about the Byzantine navy, which give an overview of the subject, and specialized studies that allow us to form a clear picture of the importance of that service¹—a picture that will become more complete as naval archaeology develops² and as the written sources (first and foremost the Venetian archives) are studied systematically.

As far as the merchant navy of the middle Byzantine period (to the 12th century) is concerned, we have only isolated pieces of evidence from the written sources. The *Chronographia* of Theophanes provides spurious information about the measures taken

This chapter was translated by John Solman.

¹ The classic study of the navy, particularly as a fighting force, of the middle and late Byzantine periods is H. Ahrweiler, *Byzance et la mer* (Paris, 1966). For the interdependence between the economy and the navy in Byzantium, as elsewhere, see R. W. Unger, *The Ship in the Medieval Economy, 600–1600* (London–Montreal, 1980), 50 ff. Among publications of a general nature, see Ph. Koukoules, “Ὁ ναυτικὸς βίος,” in *Βυζαντινὸν βίος καὶ πολιτισμὸς*, 6 vols. (Athens, 1948–57), 5:344–86, reprinted from *ΕΕΒΣ* 21 (1951): 1–48; F. H. van Doorninck, Jr., “Byzantium: Mistress of the Sea,” in *A History of Seafaring Based on Underwater Archaeology*, ed. G. Bass (London, 1972), 133–58; and the hundreds of entries on maritime topics and the Byzantines compiled by St. E. Lykoudis in the *Μεγάλη Ἑλληνικὴ Ἐγκυκλοπαιδεία*, 24 vols. (Athens, 1926–34).

² The work of A. Jal, *Archéologie navale*, 2 vols. (Paris, 1840), esp. 1:234 ff, was groundbreaking. Cf. also numerous entries in his monumental *Glossaire nautique: Répertoire polyglotte de termes de marine anciens et modernes* (Paris, 1848), or the new and augmented edition, which has twelve fascicules to date, *Nouveau glossaire nautique d'Augustin Jal: Revision de l'édition publiée en 1848* (Paris–The Hague, 1970–98). The wreck of a Byzantine commercial vessel of the early 7th century off the island of Yassi Ada, to the west of the peninsula of Halikarnassos, has been excavated and published in exemplary fashion: G. F. Bass, F. H. van Doorninck, Jr., *Yassi Ada. A Seventh-Century Byzantine Shipwreck* (College Station, Texas, 1982). For further information on underwater archaeology, cf. F. H. van Doorninck, Jr., “Byzantine Shipwrecks,” *EHB*. The recent development of underwater archaeology has led to new perspectives on the history of shipbuilding. For a catalogue of known shipwrecks in the Mediterranean, see A. J. Parker, *Ancient Shipwrecks of the Mediterranean and the Roman Provinces* (Oxford, 1992).

by Nikephoros I (802–811) in connection with the navy.³ In 982, after his defeat at Croton, Otto II fled to Rossano on a Greek merchant vessel. Information about the presence of Byzantine merchants in Egypt at this time has been preserved in documents of the Cairo Geniza.⁴ In the late Byzantine period, the source material becomes more abundant, even though the nautical activities of the Greeks were overshadowed by the domination of the Italian maritime republics—Venice and Genoa in particular—in the waters of the eastern Mediterranean. On the local level, these activities retained the characteristic of continuity already noted, while in the context of the eastern Mediterranean they became supplementary. Nonetheless, this supplementary role was useful to Venice and Genoa, which were able to draw on the Greek lands for human resources to man their own fleets, as did the advancing Turks, the development of whose navy relied largely on the Greek populations.⁵

The most notable craft built during the heyday of the Byzantine navy was the *dromon*, which is first attested in the sixth century as an oar-powered vessel with sails for auxiliary use only. Although the *dromon* was a continuation of the Roman shipbuilding tradition, it reached such an advanced stage of development as to constitute a purely Byzantine type. In the sixth century, the term *dromon* referred to a single specific type of ship, but by the ninth century it had come to include all the long warships, the predominant type of which was the hundred-oar bireme. A few decades later, in the reign of Constantine VII (913–959), we find references to *dromons* with banks of oars for 230 rowers and, as their main weapon, the *siphon* from which Greek fire was sprayed. The length of these large tenth-century *dromons* has been estimated at 60 m, their breadth at 10 m, and their height from the keel to the top of the bow and stern towers as 5–6 m. Their draft was 1.5 m. With a displacement of more than 100 tons, these vessels could cruise at 5 knots and developed a battle speed of 7 knots.

Similar speeds could be attained by the Venetian galleys (κάτεργα), ships powered by both oars and sails and fully fitted out for war, which in the summers of the late Byzantine period regularly sailed from Venice, in convoy, on commercial voyages to the eastern Mediterranean. The Byzantines sometimes made use of the ships in these convoys that crossed the Aegean (the κάτεργα τῆς πραγματείας), but not often, because

³ τοὺς τὰς παραθαλασσίας οἰκοῦντας μάλιστα τῆς Μικρᾶς Ἀσίας ναυκλήρους, μηδέποτε γηπονικῶς ζήσαντας, ἄκοντας ὠνεῖσθαι ἐκ τῶν καθαυπαγέντων αὐτῷ κτημάτων: Theophanes, *Chronographia*, ed. C. de Boor, 2 vols. (Leipzig, 1883–85; repr. Hildesheim, 1963), 1:487, 13–16; Τοὺς ἐν Κωνσταντινουπόλει ναυκλήρους συναγαγὼν [Nikephoros I] δέδωκεν ἐπὶ τόκῳ τετρακεράτῳ τὸ νόμισμα ἀνὰ χρυσίου λιτρῶν δώδεκα, τελοῦντας καὶ τὰ συνήθη κομμέρκια: *ibid.*, 487, 17–19. For a critical interpretation of these passages, see A. Christofilopoulou, *Βυζαντινὴ Ἱστορία*, vol. 2 (Athens, 1981), 169ff.

⁴ For the sources of the middle Byzantine period, see S. Runciman, “Byzantine Trade and Industry,” *The Cambridge Economic History of Europe* (Cambridge, 1952), 2:86–118; M. F. Hendy, “Byzantium, 1081–1204: An Economic Reappraisal,” *Transactions of the Royal Historical Society*, 5th ser., 20 (1970): 31–52; A. E. Laiou, “Byzantine Traders and Seafarers” in *The Greeks and the Sea*, ed. S. Vryonis, Jr. (New Rochelle, N.Y., 1993), 79–96.

⁵ For an overall examination of the relevant evidence, see G. Makris, *Studien zur spätbyzantinischen Schifffahrt* (Genoa, 1988), 102ff. Linguistic documentation of this development is provided by H. and R. Kahane and A. Tietze, *The Lingua Franca in the Levant: Turkish Nautical Terms of Italian and Greek Origin* (Urbana, Ill., 1958).



1. Representation of a two-masted ship with lateen rig on a plate, ca. 1200 (after C. H. Morgan, *The Byzantine Pottery*, Corinth XI. Results of Excavations Conducted by the American School of Classical Studies at Athens [Cambridge, Mass., 1942], 108, fig. 84)

the cost was high. For the Venetians themselves, however, such voyages, which lay at the heart of the Serene Republic's economy, were profitable because the goods carried (spices, perfumes, silk) were of high value.

There were also lighter *dromons*, while the imperial *dromonia* were used by the emperor as pleasure craft. One of them was always moored in Boukoleon harbor, ready to sail at a moment's notice. The battleships were accompanied by auxiliary vessels, transports, horse transports, and multipurpose craft such as the *chelandia* and the heavy *pamphyloi*. Our sources for these types of ship—the *Taktika* of Leo VI and the *De administrando imperio* of Constantine VII—are compilations and often use nautical terms with inconsistency. While Constantine VII refers to *chelandia* as warships (the meaning, too, of the Arabic term *shalandī* from which the word is derived), in the documents of Patmos the term is used to describe ships of any kind. Among the other words used by the sources are *sandalion* (covering everything from rowboats to small ships), *platidion* (a small cargo vessel), *koutrovion* (for transporting liquids), and *grippos* (a fishing boat). That some terms are used for both warships and commercial vessels lends further weight to the view that as a rule the development of naval architecture for warships was in advance of that for commercial craft.

During the siege of Constantinople by the Crusaders (1203–4), there is no evidence of the use of either large *dromons* or Greek fire: the know-how had been lost. By the twelfth century, the nautical technology of the West had begun to impress the Byzantines: Anna Komnene, writing around 1150 of three-masters powered by oars⁶ or sails,⁷ was speaking of Latin craft. In 1171, in the reign of Manuel I, the Byzantines were amazed by the size of a ship, also with three masts, that the Venetians used as they fled from Constantinople⁸ and that, because it was so large, was called the *Kosmos* (*Totus Mundus*, in the original Latin). This was the biggest of the Venetian transport vessels later employed in the Fourth Crusade.⁹ There is no evidence of the existence of three-masted Byzantine ships. In the Middle Ages, there were no vessels with three banks of oars on either side, and although the Byzantine writers often refer to warships as triremes, the usage is an archaism.

The wide range of pure warships in the tenth century—at a time when, in the West, there was no distinction between transports and military craft¹⁰—is proof of the high

⁶ Ναὺν ληστρικὴν μισθωσάμενος τριάρμενον . . . ἐν ᾗ ἐρέται μὲν διακόσιοι: *Alexias* 10.8.2 (*Anne Comnène, Alexiade*, ed. B. Leib, 3 vols. [Paris, 1937–45], 2:215.19–20).

⁷ Ἀπεῖργε παντάπασι τοὺς ἐκεῖθεν πρὸς τὸ Ἰλλυρικόν διαπερὼντας, οὐ τριάρμενον, οὐδὲ μυριοφόρον ὀλκάδα οὐδὲ μυοπάρωνα δίκωπον τὸ παράπαν ξυγχωρῶν πρὸς τὸν Βαῖμοῦντον διαπερᾶν: *Alexias* 10.8.2, *ibid.*, 3:115.26–29.

⁸ Τοῖς νεωρίοις ἐνὼρμει τῆς πόλεως ναῦς τῶν τριαρμενίων, ἥς δὴ πολυχανδεστέραν ἢ τὸ μέγεθος προφερεστέραν οὐ ποτε καιροῦ ναυλοχῆσιν ἐλέγετο: *Nicetae Choniatae Historia*, 6.5.3, ed. I. A. van Dieten (Berlin–New York, 1975), 182 (hereafter Choniates). Cf. also the corresponding passage in Kinnamos, *Epitome rerum ab Ioanne et Alexio Comnenis gestarum*, ed. A. Meineke (Bonn, 1836), 283.

⁹ πλοίων . . . ὧν ἓν Κόσμος παρ' αὐτοῖς ὠνομάζετο ὡς πολὺ τῶν ἄλλων ὑπερφόρον εἰς μέγεθος: Choniates, 16.21.6, van Dieten ed., 539.

¹⁰ Cf. W. Unger, "Warships and Cargo Ships in Medieval Europe," *Technology and Culture* 22 (1981): 233–52.

level of the Byzantine navy in general. However, the construction of large warships does not mean that commercial vessels of a similar size, comparable to the vast Roman grain ships of the first and second centuries A.D., were also built. Flexible and economical vessels of small and medium size were much more suited to the trade of the period. A radical change in the technology of sea transport came about when the earthenware storage jar gave way to the wooden barrel: this reduced the weight of liquid cargoes by 30% and made it possible to reduce the size of ships correspondingly, but we do not yet know when the use of wooden storage vessels became general in Byzantine ships.

In the Greek public and private documents, ships are referred to first by stating their ownership and then by their type and capacity. In describing the vessels belonging to the Great Lavra, expressions such as “ships, 4, capacity 6,000,”¹¹ or “fishing ships, 2” (1263) were used.¹² In the credentials that, in 1415, the monks of the monastery of St. George on Skyros issued for their little boat, they wrote simply that “all of this boat belongs to St. George.”¹³ The expressions that come down to us about the vessels belonging to the monastery of Patmos include “wholly owned ship with a capacity of 500 modioi” (πλοῖον ἰδιόκτητον χωρήσεως μοδίων πεντακοσίων) (1088),¹⁴ while the founder of the monastery, St. Christodoulos, in his will, uses characteristic wording in describing a vessel he bequeathed to the foundation: “another ship, a *platidion* with two masts, entrusted to Vasileios Evripiotis son of Moroioannis, now out on charter, 42 hyperpyra.”¹⁵ The names of ships owned exclusively by Greeks of Constantinople are found for the first time in the documents drawn up in 1360/61 at Kellia, on the Danube estuary, by the Genoese notary Antonio di Ponzò;¹⁶ the vessel of a certain Konstantinos Mamalis was called *Sanctus Nicolaus*, while that of the monastery of St. Athanasios was the *Sanctus Tanassius*. The naming of ships, which for the Latins—but not for the Byzantines—was a component of their existence in law, must have become general in later times.

In the twelfth century, the civil service department responsible for the merchant navy was the *sekretion* of the sea,¹⁷ which also seems to have kept the register of ships. It ceased to exist after 1204, and some of its responsibilities passed to the *kommerkiarioi*. The official unit of measurement of capacity was the sea modios, equivalent to 17.084 liters. From the middle Byzantine period, we have three texts preserved in a fourteenth-century document from Cyprus; they are addressed to state officials and describe the way in which the capacity of ships is to be measured (“Instructions . . . concerning the

¹¹ πλοῖα τέσσαρα ἐπιχωρήσεως χιλιάδων ἑξ: *Actes de Lavra*, ed. P. Lemerle et al., 4 vols., Archives de l'Athos (Paris, 1970–82), 1:285, no. 55, line 16 (hereafter *Lavra*).

¹² πλοῖα ἀλιευτικὰ δύο: cf. *ibid.*, 2:15, no. 72, line 50.

¹³ τὸ καράβι τοῦτο εἶναι τοῦ Ἁγίου Γεωργίου ὅλο: *ibid.*, 3:216.

¹⁴ Ἐγγραφα Πάτμου, vol. 1, Αὐτοκρατορικά, ed. E. Vranousis (Athens, 1980), 72, no. 7.

¹⁵ ἕτερον πλοῖον πλατίδιον δικάταρτον, πιστικευόμενον παρὰ Βασιλείου Εὐριπιώτου τοῦ Μω[ρο]ϊωάννου, ἀπερχόμενον νῦν εἰς ναῦλον, νομίσματα τεσσαράκοντα δύο ὑπέρπυρα: *Lavra*, 1:48.

¹⁶ G. Pistarino, *Notai genovesi in Oltremare: Atti rogati a Chilia da Antonio di Ponzò, 1360–61* (Genoa, 1971), 80, no. 47, and 141, no. 80. Cf. also the index s.v. “lignum.”

¹⁷ Cf. N. Oikonomides, “The Role of the Byzantine State in the Economy,” *EHB* 1007.

measurement of ships, how they are to be measured and how the capacities of them are to be stated" [Εἰδησις . . . τοῦ ἐξάμου τῶν πλοίων, πῶς ὀφείλουσιν ἐξαμῶνεσθαι καὶ δηλοποιεῖσθαι αἱ τούτων χωρήσεις]). The texts provide makeshift instructions on how to calculate capacity, with more detailed guidance as to how to convert the capacity into the corresponding tariff categories for wheat, timber, and liquid cargoes after deducting the noneffective parts of the ship. They were obviously intended for use in custom-houses.¹⁸ As long as the *sekretion* of the sea was in existence, ships were liable for the payment, according to circumstances, of charges for registration, docking, arrival, departure, passage, and measurement of their capacity (known, respectively, as the ναυλοκαταρτιατικόν, λιμενιατικόν, ἐμβλητικόν, ἐκβλητικόν, διαβατικόν, μετρητικόν), while the population was obliged to contribute cash and corvée labor to the preparation and arming of the fleet (ἐξέλασις πλωϊμων, ἐξάρτισις πλωϊμων, κατεργοκτισία). In the time of the empire of Nicaea and thereafter, these charges were collected as a *kommerkion*, that is, as a percentage tariff on merchandise, while levies in favor of the fleet (τὰ νομίσματα τῶν πλωϊμων) existed in name only; in fact, these were a form of tax.

Some shipping issues—for example, the protection of such goods as were salvaged from ships that ran aground or sank—were settled by the executive authorities in accordance with the details of the case. Andronikos I Komnenos (1182–85) introduced Draconian penalties for the theft of such cargoes¹⁹—a practice to which we have direct and indirect testimony dating from the Palaiologan period as well.²⁰ The general legislation on merchant shipping was contained in the *Rhodian Sea Law* (6th or 7th century), which was a digest of earlier provisions,²¹ while the next codification—one that retained its prestige throughout the Balkans down to modern times—was that carried out in the fourteenth century by Constantine Harmenopoulos in section 21 (“Concerning maritime law” [Περὶ ναυτικῶν]) of book 2 of his *Hexabiblos*.²² The *Rhodian Sea Law* also included regulations for work and safety at sea, while Harmenopoulos put the emphasis on questions of civil liability stemming from charter parties in the event of damage (to ships or goods).

The choppy Black Sea and the Aegean with its frequent storms, its Etesian winds (the *meltemia*, strong and steady northerly winds that blow during the daytime in the eastern Mediterranean from spring to summer), and its steep, highly indented coastline were convenient mainly for sailing vessels of small or medium displacement and limited length. The principal requirement of natural harbors was that they should be

¹⁸ E. Schilbach, *Byzantinische metrologische Quellen*, 2d ed. (Thessalonike, 1982), 126–33.

¹⁹ Choniates, van Dieten ed., 1:326–29.

²⁰ G. L. F. Tafel and G. M. Thomas, *Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig mit besonderer Beziehung auf Byzanz und die Levante*, 3 vols. (Vienna, 1856–57; 2d ed. Amsterdam, 1964), 3:215; MM 3:81 and 92. For the case law on shipwrecks, see also S. Troianos, “Τὰ ναυάγια, ἡ νεαρὰ 64 Λέοντος τοῦ Σοφοῦ καὶ τὸ κείμενο τῶν Βασιλικῶν,” *Πειραιϊκὴ Νομολογία* 14 (1992 [1994]): 488–95.

²¹ A. Ashburner, ed., *The Rhodian Sea Law* (Oxford, 1909); cf. G. Letsios, *Νόμος Ῥοδίων Ναυτικός = Das Seegesetz der Rhodier* (Rhodes, 1996).

²² For the most recent edition, K. G. Pitsakis, *Κωνσταντίνου Ἀρμενοπούλου Πρόχειρον νόμων ἢ Ἐξάβιβλος* (Athens, 1971).

sheltered, regardless of the kind of coastline on which they were located (e.g., Piraeus, Ephesos, Thessalonike, Alexandria, the Golden Horn). Mooring in these harbors, the fact that ships sailed close to the coast, and the short distances that were the rule called for vessels with high levels of maneuverability. One of the radical changes in shipping in the Middle Ages was the introduction of the triangular lateen sail, whose use had begun to spread through the eastern Mediterranean in Roman times and which predominated after the sixth century. This was attached to the mast by means of a long inclined crossbar (in larger ships, this consisted of two elongated, thin wooden bars joined together), and it greatly facilitated tacking (even at angles of more than 30 degrees) and maneuvering. A simple adjustment was sufficient to cause the sail to billow upward, converting part of the force of the wind into a vector that counterbalanced the shallow draft of medieval ships and their smooth keels, thus making it more difficult for them to capsize. The lateen sail, the short length, and the pointed bow and stern (Fig. 1) reduced the risk of the bottom of the ship thumping down violently into the troughs between waves, thus enabling the vessels to sail even when the usual strong northerly winds were blowing. Such specifications are still used today in boat-building in the eastern Mediterranean for small-capacity wooden craft (caiques for fishing or trade, though these are now mechanically powered). When combined with the principle of tacking, these characteristics made it possible for boats to sail even in bad weather. The long warships, on the other hand, were vulnerable and needed tailwinds when the oarsmen were not rowing. In the open sea, maneuvers into a head wind were a time-consuming business, and so ships preferred to sail along the coast in order to exploit the occasional gusts of wind that blow there from various directions even during the period of the Etesian winds, especially when the shore is mountainous. This, and not a fear of the open sea, was one of the main reasons why coastal navigation was so widespread in antiquity and the medieval period.

From the large *dromons* to the merchant vessels, ships were steered by means of two broad oars fitted to the stern quarters. These were in the charge of a sailor. Single rudders, like those used in caiques today and consisting of a broad plank of wood attached to the sternpost and operated by a tiller, first appeared in the western Mediterranean in the thirteenth and fourteenth centuries, and their use in the eastern Mediterranean cannot have been general down to the time of the fall of Constantinople. The sailors of Byzantium, like those of antiquity, relied on experience when navigating and at night oriented themselves by the stars, or they would drop anchor when darkness or cloud cover overtook them in unknown waters. The compass is mentioned for the first time as a curiosity in Byzantine texts of the century prior to the fall of Constantinople and was not associated exclusively with navigation, which continued to be empirical until the end of the empire. In the Mediterranean, the compass was in any case of much less importance than it was for sailing on the open ocean. In general, technological developments tended to come only gradually into use, and any speculation as to who introduced, for example, the compass or the single rudder in the Mediterranean is an oversimplification.

In merchant vessels, rowing was uneconomical and played only a secondary role.

The approach from the Aegean to Constantinople was difficult and time-consuming because the current in the Hellespont always runs from north to south and a north wind is usually blowing. Patriarch Gregory (George) of Cyprus (1283–89) took two days to sail from Constantinople to Gallipoli and seven days to make the return trip, even though the sailors rowed continuously all the way back. However, with a steady tailwind it might even have been possible to sail from Ainos at the mouth of the Hebros to Crete in five days and nights, as one Greek captain claimed to have done in 1402.²³ Shortly after 1300, the learned monk Theodoulos (Thomas Magistros) traveled on a Greek sailing ship from Thessalonike to Constantinople.²⁴ The ship must have been large and two-masted (see Fig. 1), and it had a numerous crew and a lifeboat. It carried passengers, but also carried on entrepôt trade. Magistros was impressed by the skill of the helmsman and of the sailors as they scrambled up the masts when the vessel was under sail.²⁵ He also states that the crew tended to use “mixed Greek” when at work, and this is, perhaps, the earliest reference to the *lingua franca*. The voyage to Constantinople lasted twenty days, and the return trip, during which the ship called at a number of harbors, took forty-five. Bearing these instances in mind, with the generally unstable weather conditions to be encountered in the area, it is difficult to speak of “typical” lengths of time that journeys might take or “representative” speeds at which such commercial craft might sail.

Vessels such as that on which Magistros traveled formed the bulk of the Byzantine merchant fleet at all times in the empire’s history. We can only speculate as to what was the maximum cargo such ships could transport. Some special craft might be able to carry up to 300 tons of cargo, or perhaps even more, but vessels of this size (army transports of the period when the empire was at its zenith, special ships to transport the huge stones needed for monumental structures) were of course not representative. The rule was undoubtedly closer to merchant vessels such as that of Yassı Ada: of medium size, it was 20 m long and had a beam of 5.22 m. When it sank, it was carrying passengers and 40 tons of amphoras, but its capacity would have enabled it to transport more cargo.

The most important harbors were, naturally enough, the shipbuilding centers of the empire, with Constantinople occupying first position. In the middle Byzantine centuries, many ships must also have been built in the seafaring themes of Asia Minor and

²³ G. T. Dennis, “Three Reports from Crete on the Situation in Romania, 1401–1402,” *StVen* 12 (1970): 247.

²⁴ The text in which Magistros describes his journey was published in M. Treu, “Die Gesandtschaftsreise des Rhetors Theodulos Magistros,” *Festschrift C. F. W. Müller* (= *Jahrbücher für classische Philologie*, suppl., 27) (Leipzig, 1900), 5–30. Cf. also I. Dimitroukas, “Τὸ ταξίδι τοῦ ρήτορα Θεωμά Μαγίστρου (1310): Μία ἐπανεξέταση,” *Σύμμεικτα* 10 (1996): 163–88. Cf. also A. Avramea, “Land and Sea Communications, Fourth–Fifteenth Centuries,” *EHB* 76.

²⁵ τὸν τε μελεδωνὸν τῆς νεῶς τοὺς τε ναύτας αὐτοὺς, τὸν μὲν τοὺς οἰακάς ὡς εἰκός, τοὺς δὲ μεταχειρίζοντας τὰ ἱστία καὶ νῦν μὲν ἐνταῦθα, νῦν δ’ ἐκεῖσε χωροῦντας, ἄνω καὶ κάτω στρεφομένους πολλάκις πρὸς τὸ δοκοῦν εὐτυχές, ὥσπερ τινας ὄντας πτηνοὺς καὶ τοῖς ποσὶν ἐλάχιστα κεκρημένους. ὧν ἦν ἀκοῦειν φωνὰς ἀσήμεους, καὶ πολλὴν θόρυβον, ὑποβαρβαρίζόντων ἐν τοῖς τοιούτοις ὡς ἔθος. Treu, “Gesandtschaftsreise,” 5.25–6.1.

the Aegean and at the naval bases of southern Italy and along the Adriatic. Timber was not only a basic commercial product but also a raw material of strategic importance, and for that reason trade in it was controlled. One of the first measures taken by the emperors after the recapture of Crete (960/961) was to forbid the exporting of timber to the Arabs—a ban with which Venice refused to comply, even when John I Tzimiskes threatened to burn the Venetian fleet. The shrinkage in the territory of the empire, and especially the loss of Asia Minor, meant that the shipyards and the forests from which timber could be obtained were no longer accessible. In 1348 John VI Kantakouzenos had trouble in procuring raw materials with which to build ships, in Constantinople, to face the Genoese of Galata; and since a blockade made it impossible to transport timber to the capital, wood suitable for shipbuilding was moved overland from the Little Haemos mountains.²⁶

Until only a few years ago, it was believed that the method of shipbuilding by which the bent timbers that make up the frame of the ship were attached laterally to the keel, with the planking nailed on to them, was developed in Italy during the tenth and eleventh centuries, and that it was to this innovation, which made it possible to build safer ships at lower cost, that the navies of the Italian cities owed part of their superiority. Under the earlier method of boat-building, the skillfully fitted planking, with the cross beams, was the bearing frame of the vessel. However, thanks to underwater archaeology we now know that this improvement was gradually introduced all over the Mediterranean, beginning in the early Middle Ages. The Yassı Ada ship had been constructed by a mixed method;²⁷ rudimentary bent timbers—short, only slightly curved, and of varying sizes—were attached to either side of the keel and contributed, with the planking, to keeping the hull stable. The degree to which requirements in shipbuilding timber were specialized can be seen from the fact that the planking of the flat bottom was of cypress wood, as were the keel and the sternpost; the planking of the sides was made of (umbrella) pine, the bent timbers were of pliable elm, and the other beams were of oak, a wood that does not rot easily.

In 1348 the shipyards of Constantinople were moved from the Golden Horn to Kontoskali, a harbor on the Propontis that afforded greater safety from the Genoese, and they remained there even after the fall of the city. There is evidence that among the shipbuilding centers of the late Byzantine period were Smyrna, the coast near Prousa, Gallipoli, Lemnos, Monemvasia, Rhodes, Ainos at the mouth of the Hebros, and Patmos. The raw materials for fitting out and maintaining ships, such as hemp for the sails and ropes, and tar and fat for caulking, originated primarily on the north side of the Black Sea. Byzantium was under a contractual obligation to repair and fit out Venetian ships in Constantinople.²⁸ The receipts for such work done on Catalan ships in 1352, which have survived, indicate that the naval bases of the Byzantine capital

²⁶ *Ioannis Cantacuzeni Historiarum libri quattuor*, ed. L. Schopen, 3 vols. (Bonn, 1831–32), 3:70–77.

²⁷ G. F. Bass and F. H. van Doorninck, Jr., “An Eleventh-Century Shipwreck at Serçe Liman, Turkey,” *International Journal of Nautical Archaeology* 7.2 (1978): 119–32.

²⁸ Cf. MM 3:91.

were capacious and possessed skilled craftsmen.²⁹ Regardless of its outcome, the undertaking of Kantakouzenos, to which I have already referred, of building an entire war fleet at top speed in 1348 presupposed the existence of well-organized shipyards. The vessels built at this time were fitted with battle towers, but they sank off the capital in the first spell of rough weather.

The Venetians made full use of the shipbuilding tradition of the Greeks, as we can see in the case of the Palopanos family, a dynasty of shipbuilders. The founder of the family and the most skillful builder of galleys in his time, Theodore Vasos (Theodoro Baxon in the Venetian sources), died in 1407, and it was not until seventeen years later that the Serene Republic succeeded in enticing his nephew Nicholas Palopanos (Nicolò il Greco) to come from Rhodes to take his place, in return for very generous remuneration. Nicholas managed the shipyards until 1437, passing on his post to his son George (Giorgio il Greco).³⁰ In Venice, the title *proto* (from *πρῶτος* = master craftsman) was given to the chief shipbuilder.

The technology of galley construction was a state secret in Venice. In earlier times, the Byzantines had attached similar significance to marine technology, and the death penalty was laid down for those who, in the days of their thalassocracy, revealed the secrets of shipbuilding to foreigners.³¹ On the other hand, the Venetians differed from the Byzantines in that they were interested in importing know-how and not just in protecting and developing the existing shipbuilding skills.

As for the attitude of the Ottomans toward the Greek shipbuilders, it is indicative that when Constantinople was taken and emptied of almost all its Greek inhabitants, Mehmed II introduced a policy that gave special protection to shipbuilders—in order that he might make use of them himself.³²

²⁹ A. Rubió i Lluch, *Diplomatari de l'Orient Català* (Barcelona, 1947), 732–35.

³⁰ Cf. F. Lane, *Venetian Ships and Shipbuilders of the Renaissance* (Baltimore, Md., 1934), 54ff.

³¹ ναύκληρος ὁ βαρβάρους κατασκευάζειν διδάσκων ναῦς, ἡγουν ὁ πλοῖα ποιεῖν ἔθνεσιν ἀλλογενέσι ὑποδεικνύς, κεφαλικαῖς τιμωρίαις ὑπόκειται, ὡς τοῖς ῥωμαίων ἐχθροῖς διδοὺς ὄπλα καὶ ἰσχυροὺς ἐκείνους κατὰ τούτων ἀπεργαζόμενος: *Synopsis minor* N, chap. 17 (Zepos, *Jus*, 4:471). Cf. also Ἐπαναγωγή, title 40, § 40 (Zepos, *Jus*, 2:362).

³² [Mehmed II] *et totam Urbem infra paucos dies fere omni habitatione evacuit. Mechanicos autem, et presertim fabros ac constructores navium, vivos reservavit et eos sibi operari instituit*, we are told by the humanist writer Poggio Bracciolini [1459†]: N. Jorga, “Notes et extraits pour servir à l’histoire des croisades au XVe siècle,” *ROL* 8 (1900–1901): 276.

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The Means of Agricultural Production: Muscle and Tools

Anthony Bryer

The principal means of Byzantine production was the muscle of its peasants. The Byzantine state, its administration, defense, even patronage of its arts, eventually depended upon how efficiently it exploited this simple resource. So did the peasant: in the absence of a work ethic, he had an approach to manual labor, which was to avoid it beyond the immediate needs of domestic autarky, unless coerced by taxation, tithe, or impost, or (more rarely) lured by a market for surplus that lay within a day's walk of a burdened beast or woman. In turn, the peasant knew how to exploit his muscle by implements, which offer almost infinite leverage. A simple crowbar gives a mechanical advantage of factor 4, but given the right gearing a child can, in theory and with his little finger, perch an 800-ton Egyptian obelisk on four brazen blocks in the Hippodrome of Constantinople. In fact, it took the men of Emperor Theodosios I a month to erect it in 390. The question is where and why the line of technological stimulus stops? For example, the peasant did not just know that a crowbar gave him an advantage of four, but that any tool was more efficient if iron-shod—and even wooden implements need iron to shape them. While the study of Byzantine art is now highly refined, the history of the Byzantine village blacksmith has yet to be written, even though he made the nails upon which eventually hung the fate of the empire. Yet how many today can readily distinguish between such banal commonplaces as Byzantine horseshoes (which were flat) and oxshoes (which were cloven)? Research naturally advances at different speeds in different fields. But the constants I have stated are common not just to Byzantine, but to medieval Mediterranean, indeed, to all preindustrial societies.¹

¹ A basic bibliography starts with a journal devoted to the subject: *Tools and Tillage* 1– (1968–) (National Museum of Denmark, Copenhagen). Discussions of such questions include the following (in order of publication): L. White, Jr., *Medieval Technology and Social Change* (Oxford, 1962), and subsequent discussion by R. H. Hilton and P. H. Sawyer, “Technical Determinism: The Stirrup and the Plough,” *Past and Present* 24 (1963): 90–100; K. D. White, *Agricultural Implements of the Roman World* (Cambridge, 1967), idem, *Roman Farming* (London, 1970), and idem, *Farming Equipment of the Roman World* (Cambridge, 1975); G. Duby, *Rural Economy and Country Life in the Medieval West* (London, 1968), 16–22; M. Blagojević, *Zem'loradn'a u Sredn'ovekovnoj Srbiji* (Agriculture in medieval Serbia) (Belgrade, 1973); J. W. Nesbitt, “Mechanisms of Agricultural Production on Estates of the Byzantine Praktika”

Even these simple constants need questioning. Take iron again. Iron had been forged in Anatolia since Hittite times; there is plenty of written and archaeological evidence for “Saxon” ironworking in the southern Balkans in the late Middle Ages.² But it has been argued that at times Byzantium almost dropped out of the Iron Age. Does it matter? After all, the polished granite obelisk in the Hippodrome had originally been cut for the Egyptian pharaoh Thutmose III (1549–1503 B.C.) without using iron at all. This should give us pause for thought.

Byzantine pastoralism and transhumance are prime examples of the intricacy of our problem: how to estimate their economic importance on the evidence we have? Pastoralism requires investment, forethought, and social organization on a scale far beyond that of a peasant's holding. The English medieval manorial three-field system of textbook legend is complicated enough, but the unrecorded details of the long-term seasonal rhythm of transhumance are far more intricate, depending upon deals between permanent winter villages primarily pursuing agriculture, concerning their respective summer stations and grazing, maybe 50 km distant and 1,000 m above, for negotiated droving routes and rights that rarely make much sense on the map, and none at all above the tree line, where the apparently endless freedom of the pastures is deceptive. Until quite recently in Chaldia, for example, if your flock trespassed quietly past an unregarded boundary cairn in the Pontic Gates one summer, there would be murder in Trebizond next winter—niceties compounded in the Middle Ages by the intrusive claims of more purely pastoral Turkomans when spring battles were carried up into the mountains and coastal grazing defended in autumn.³

(Ph.D. diss., University of Wisconsin, Madison, 1973), and cf. T. Teoteoi, “Le travail manuel dans les *tyrika* Byzantins des XIe–XIIIe siècles,” *RESEE* 17 (1979): 455–62; A. E. Laiou-Thomadakis, *Peasant Society in the Late Byzantine Empire* (Princeton, N.J., 1977); P. Lemerle, *The Agrarian History of Byzantium from the Origins to the Twelfth Century: The Sources and the Problems* (Galway, 1979); A. A. M. Bryer, “The Estates of the Empire of Trebizond: Evidence for Their Resources, Products, Agriculture, Ownership and Location,” *Ἀρχαῖον Πόντου* 35 (1979): 370–477, reprinted in idem, *The Empire of Trebizond and the Pontos* (London, 1980), art. 7, and idem, “Byzantine Agricultural Implements: The Evidence of Medieval Illustrations of Hesiod's *Works and Days*,” *BSA* 81 (1986): 45–80; S. E. Rees, *Ancient Agricultural Implements* (Aylesbury, 1981); A. M. Watson, *Agricultural Innovation in the Early Islamic World: The Diffusion of Crops and Farming Techniques, 700–1100* (Cambridge, 1989), 120–62; M. Kaplan, *Les hommes et la terre à Byzance du VIe au XIe siècle: Propriété et exploitation du sol* (Paris, 1992), 46–54, and subsequent discussion by A. Kazhdan and M. Kaplan, “One More Agrarian History of Byzantium,” *BSI* 55 (1994): 66–95; K. Greene, “Technology and Innovation in Context: The Roman Background to Medieval and Later Medieval Developments,” *JRA* 7 (1994): 22–33.

² See S. Andreev and E. Grozdanova, *Iz Istoriata na Rudarstvoto i Metalurgiata na Bŭlgarskite Zemi prez XV–XIX vek* (Historical survey of ore mining and metal working in the Bulgarian lands in the 15th–19th century) (Sofia, 1993).

³ M. Gyóni, “La transhumance des Vlaques balkaniques au Moyen Age,” *BSI* 12 (1951): 29–42; A. A. M. Bryer, “Greeks and Turkmens: The Pontic Exception,” *DOP* 29 (1975): 113–49, reprinted in idem, *Empire of Trebizond and the Pontos*, art. 6; J. E. Woods, *The Agquyunlu: Clan, Confederation, Empire* (Minneapolis–Chicago, 1976), esp. fig. 2; C. J. Wickham, “Pastoralism and Underdevelopment in the Early Middle Ages,” *Settimane* 31 (1981): 430; R. P. Lindner, *Nomads and Ottomans in Medieval Anatolia* (Bloomington, Ind., 1985); M. F. Hendy, *Studies in the Byzantine Monetary Economy c. 300–1450* (Cambridge, 1985), 54–56; A. Harvey, *Economic Expansion in the Byzantine Empire, 900–1200* (Cambridge, 1989), 149–53.

But today there is almost nothing to show for Byzantine pastoralism and transhumance. Apart from sheep shears, which are substantial scissors, the only implement it requires is a crook. The Byzantine bishop may have been called a *poimen*, or shepherd, but unlike that of his western counterpart, his crozier was not actually a crook to provide us with a surviving example. Otherwise the brown marks left by the black tents of nomads in the Isaurian uplands turn green again overnight, but the shallow trenches for their loom weights may still be traced.⁴ So can *mandrai*, the drystone sheepfolds that litter the Pontic Alps. Here, for example, there is a tenth-century lead seal of Dositheos, *spatharokandidatos*, perhaps imperial *notarios* of the herds (*agelon*) and *anagrapheus* of Chaldia,⁵ but flocks are notoriously difficult to track down and put on a tax record. In Roman Pisidia and Pamphylia there are epigraphic hints of people in the cities of the coast holding a dual citizenship with associated summer stations, confirmed by pollen analysis of the relative exploitation of the mountain forests and pastures, but all such evidence that this transhumant rhythm and economy are very old is also very tentative. Osteology and teeth can provide evidence for kill-off patterns, and hence an indication of the size of ancient flocks, but I do not know of any specifically Byzantine sample that has been analyzed.⁶ Of course, before selective breeding, and by western analogy, Byzantine stock was by modern standards on a Lilliputian scale. Today you could probably lift a Byzantine calf in one hand: precise evidence of how small it was should in theory be revealed in libraries by the size of manuscript folio skins of uterine calf (vellum) or lamb (parchment), however cut and trimmed to octavo size: an analysis that I do not think has been attempted for Byzantium.

Diet may offer a clue to the extent of pastoralism. Of course, there is literary evidence for white cheese, especially Vlach, which was disparaged fasting food, but none of the spheroid wooden churns in which it is made, still swung to song by children and grandmothers. As for Galen's *oxygala*, the first traveler from colder western climes does not seem to have noticed it in Anatolia until 1555, when he heard it called with a name that sounded something like *yogurt*.⁷ But the mark of a transhumant (as opposed to pure pastoralist) is his porridge, for it requires access to cereal agriculture and can be taken up to the summer pastures as the oldest packet soup in the world: the Anatolian

⁴ T. Faegre, *Tents: Architecture of the Nomads* (London, 1979).

⁵ Barber Institute of Fine Arts, University of Birmingham, seal 0181, for which I am grateful to Archie Dunn for discussion. Cf. N. Oikonomides, *Les listes de préséance byzantines des IXe et Xe siècles* (Paris, 1972), 338; A. A. M. Bryer, "David Komnenos and Saint Eleutherios," *Ἀρχαῖον Πόντου* 42 (1989): 162 (on Paphlagonian droved swine and cured pork, pp. 173–74, 182).

⁶ Cf. S. Payne, "Kill-off Patterns in Sheep and Goats: The Mandibles from Aşvan Kale, *AnatSt* 23 (1973): 281–303; C. N. Constantinides, *Higher Education in Byzantium in the Thirteenth and Early Fourteenth Centuries, 1204–ca. 1310* (Nicosia, 1982), 135: "During Lent when fasting was practised sheepskins were not available. The best period for collecting parchment seems to have been in spring after Easter Sunday"; J. J. Coulton, "North Lycia before the Romans," *Akten des II. Internationalen Lykien-Symposiums*, ed. J. Borchhardt and G. Dobesch (Vienna, 1993), 1:82–83, and idem, "Balboura and District Research Project, 1993," *AnatSt* 44 (1994): 10.

⁷ A. G. Busbecq, *Omnia quae extant* (Louvain, 1633), 90, letter 1 of 1555 from near Amasya: "Galenon non ignoti, quod ipse Oxygalam, iste Jugurtham dicunt." Jugurtha is evidently not the king of Numidia but *yogurt*, unknown to shepherds in colder climes.

Greek and Turkish name is *trachana* or *tarhana*, but it was made under various other names (an old English one is “hasty pudding”) from Spain to Syria by all shepherds.⁸ Toponymy can help too, but while the survival of its name may be the first and last evidence of the existence of a place, pastoralists graze across space. Yet it is worth working through old Balkan and Anatolian maps to detect which fixed villages gave names to their summer pastures. More precisely, Byzantines had technical terms for the system of summer and winter pastures (*parcharia/cheimadia*) before their Turkish equivalents in Anatolia (*yayla/kışla*).

For this huge and hidden economy, the art historian may still have the most vivid evidence because of the happy accident that shepherds attended the Birth of Christ. The shepherds who watched their flocks by night are depicted in mosaic, such as in the Holy Apostles, Thessalonike of about 1312–15; they are strange, shy figures in their sheepskins and woolen leggings, oddballs rarely encountered in town. They are also invariably male, as is the milkman depicted in the Great Palace mosaics. Was the Arcadian tradition of the shepherdess in pastoral poetry perhaps replaced by a taboo, against women milking sheep, which survives among the Sarakatsans? It depends on the culture: Turkoman women were notoriously free of the veil to get down to work in the pastures. Was the real scandal of twelfth-century Mount Athos not that Vlachs introduced their womenfolk along with their flocks onto the Holy Mountain, but that their ewes were milked by transvestite shepherdesses?⁹ All this is speculation because, like that of the Byzantine blacksmith, the history of the Byzantine shepherd has yet to be written; but it does reveal problems of evidence.

The evidence of art is invariably the most attractive. For example, anyone interested in Byzantine diet, kitchen utensils, cutlery, indeed napkin etiquette, looks closely at paintings of what is laid out on the table at the Marriage at Cana. Similarly, anyone interested in Byzantine agricultural implements looks at manuscript illustrations of the parable of the Laborers in the Vineyard: Matt. 20:1–16. The example illustrated in figure 1 comes from the Four Gospels commissioned by Tzar Ivan Alexander of Bulgaria in 1355 (British Library Add. ms. 39627, fol. 59).¹⁰ Ostensibly referring to Palestinian viticulture of the first century A.D., it provides in fact one of the clearest surviving illustrations of a principal Byzantine digging implement, the two-pronged *lisgari* “spade-fork” wielded by the first and fourth figures. May it therefore be taken to be firsthand evidence for fourteenth-century Bulgarian agriculture? Yes, and no, because the artist is palpably copying the same scene, or an archetype, in the eleventh-century Paris. gr. 74, fol. 39v: an illustration of Byzantine agriculture so often reproduced that it

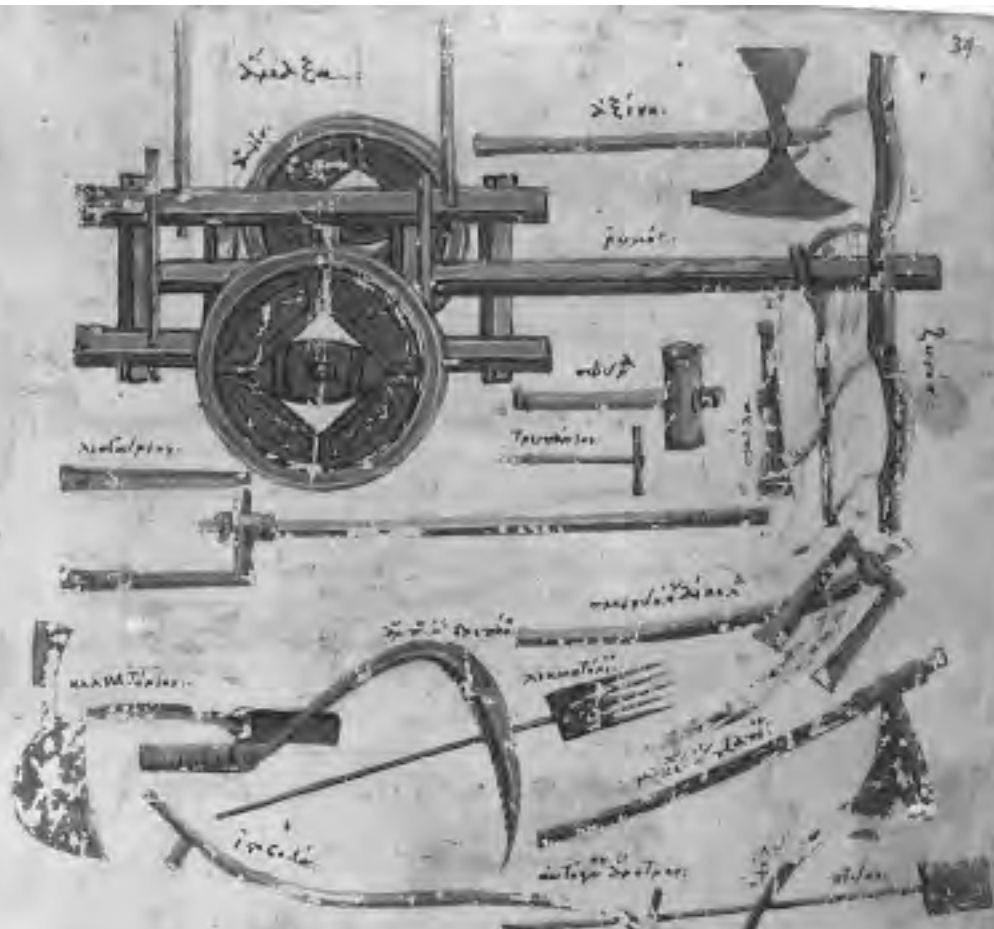
⁸ A. Bryer and S. Hill, “Byzantine Porridge: *Tracta*, *Trachanas*, *Tarhana*,” in *Food in Antiquity*, ed. J. Wilkins, D. Harvey, and M. Dobson (Exeter, 1995), 44–54.

⁹ J. K. Campbell, *Honour, Family, and Patronage* (Oxford, 1964), 274: “women never milk sheep or use a shepherd’s crook; men almost never milk goats.” For the Athonite scandal, see E. Amand de Mendieta, *Mount Athos* (Amsterdam, 1972), 79–81, and A.-M. Talbot, “Women and Mount Athos,” in *Mount Athos and Byzantine Monasticism*, ed. A. Bryer and M. Cunningham (London, 1996), 69–70.

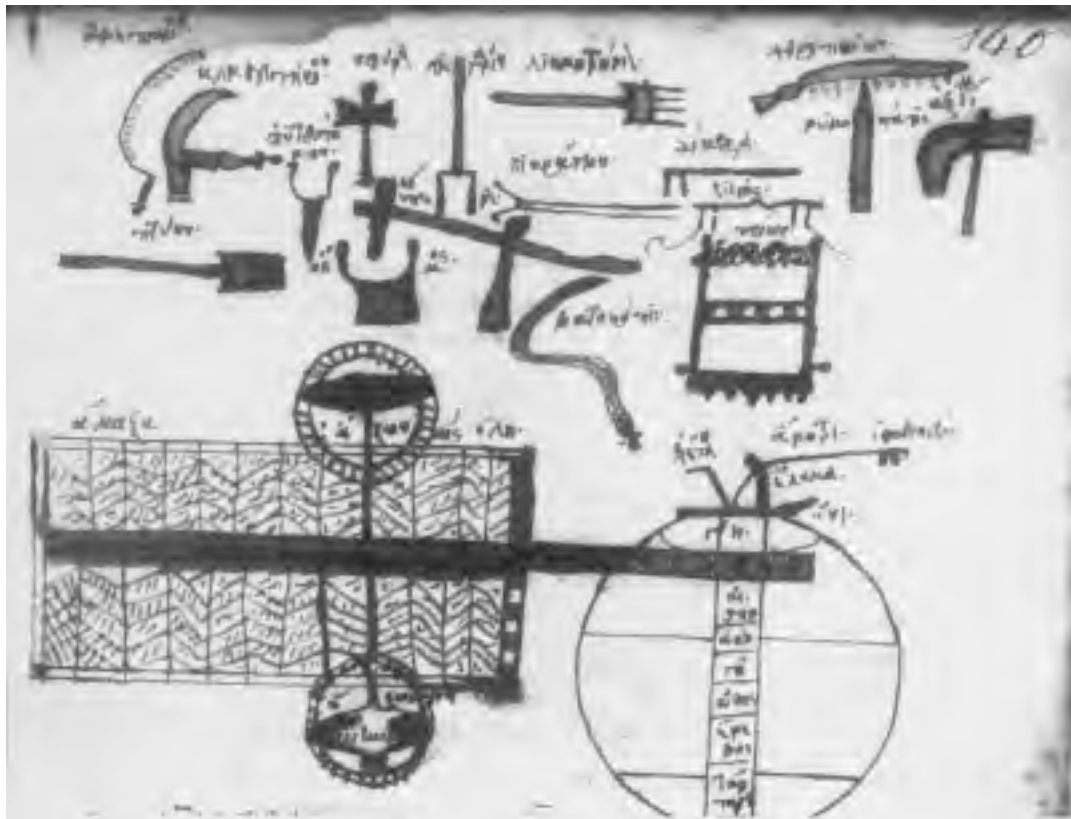
¹⁰ E. Dimitrova, *The Gospels of Tzar Ivan Alexander* (London, 1994), 54, fig. 56.



1. British Library, Add. ms. 39627, fol. 59r (1355), "The Laborers in the Vineyard"



2. Marc. gr. Z.464, fol. 34r (Triklinios, 1316–19). Labeled implements, reading from above: *axine*/pickaxe (looks more like a *pelekys*/double-bladed hatchet); *hamaxa*/cart with *apsis*/felloe; *rymos*/shaft; *zygos*/yoke; *sphyra*/mallet; *smila*/chisel; *trypanion*/helical auger; *lisgarion*/“spade-fork”; *dikelli*/drag-hoe; *kladeuterion*/vinedresser’s knife; *drepanon*/sickle; *likmeterion*/winnowing fork; *makele*/ *tzapion*/mattock; *ptyon*/winnowing shovel; all lying confusingly across a schematic representation of the plow (facing left), below which is a realistic scene of plowing (facing right), along with its labeled parts, including the *echetle*/stilt and *istoboeus*/yoke-beam, not forgetting the essential *boukentrion*/goad. The facing fol. 33v shows an *olmos*/mortar being pounded by an advanced *hyperon*/pestle operated by a man perched on the tip of a kind of seesaw.



3. Paris gr. 2786, fol. 140r (late 14th century). At the top left, reading labels of implements from left to right: *drepanon*/serrated sickle; *ptyon*/winnowing shovel; a fine example of a *kladeuterion*/vinedresser's pruning knife; *phyteuterion*/vine fork or prop; *sphyra*/double-headed mallet; below an *olmos*/mortar in section, operated by a rocking *hyperon*/pestle to the right; above which *lisgarin*/“spade-fork”; a rather etiolated *dikranion*/pitchfork; with *likmeterion*/winnowing fork above and a snaky *batokopin*/bramble-slasher below. Moving to the right, a *dikella*/drag-hoe above a *zygos*/double yoke with harnessing are notably out of comparative scale. Below them is an apparently unique but well-observed Byzantine illustration of a *prion*/frame-saw, demonstrating how the double-handled toothed blade at the bottom is held in tension by a torque of swirling gut or leather thongs at the top, with an elegant crossbar in the middle of the wooden frame. Above it is a *cheioprion*/handsaw with serrated blade, perched above a mysterious vertical spindle or dibble labeled *rymostates*, of which this picture is our only evidence: it may have been the essential peg that locks the plow-beam to either the yoke or the sole. At the top right is an *axine*/pickaxe, which looks more like a hatchet. Below this agricultural catalogue are the *hamaxa*/cart and plow. The cart (with *axona*/axle and *apsis*/felloe) follows Hesiod's lines bravely, but the artist has a more adventurous idea of perspective than Triklinios: his depiction makes sense if you disentangle the way he views it at all angles at once. The high basket rick is there, but the disk wheels are shown both laterally and in plane. The circle to the right is not a wheel, but explains the Hesiodic cosmography, above which is balanced an elemental ard with all its named parts: *echelle*/stilt, *elyma*/sole, *hynis*/share, and *istoboeus*/yoke-beam.

is unnecessary to do so here.¹¹ But it raises other problems, some unexpected. One commentator pronounces this famous scene not to be of a vineyard at all, but of a sunflower field, ignoring the fact that sunflowers were not introduced from America to the Balkans until the sixteenth century. The bushy-topped trees are in fact a Byzantine artistic convention and may represent olives up which Byzantines trained vines, among other crops that needed supports. Another problem is the *lisgari*, which has evidently puzzled both British and Albanian interpreters, who have tacitly and independently redrawn it for publication as the more familiar modern single-bladed garden spade—an implement hardly known to Byzantines.¹² The *lisgari* is a “spade-fork,” used to prepare the ground for sowing, especially in soil where a plow cannot be used. But our problem is different. The scene is clearly labeled as, and intended to be of, what Byzantines would recognize as a vineyard, so is good evidence. But the tools most appropriate to a vineyard are not actually the *lisgari* and *drepanon* sickle, shown in it, but the *dikelli* hoe and *kladeuterion* vinedresser’s knife, nor is there any sign of a *phyteuterion*, or forked vine support. The *kladeuteri* was developed from the billhook, to which it seems to be receding in modern Turkish examples from former Greek areas of vine growing. But it was the most neatly designed tool that the Byzantines inherited fully armed from antiquity, recorded in figures 2 and 3 and elsewhere, but not so far in archaeological evidence.¹³ A sort of Byzantine Swiss army knife, the *kladeuteri* serves up to six distinct functions and met no rival until the invention of the *sécateur* by Bertrand de Molleville (1744–1818)—some vinedressers still prefer it. But it does not seem to feature in figure 1. Perhaps the author was just a better artist than a laborer in the vineyard. Perhaps we should be more wary about Gospel illumination, or perhaps we should learn more about medieval vinedressing.

The obvious evidence is archaeology, but of that there is pitifully little and mostly from the western shores of the Black Sea, now in Romania and Bulgaria—Crimean Cherson also yields material, along with *garum*-pans for making that powerful and universal relish from the entrails of fish.¹⁴ But I do not know, for example, of a single identified *lisgari* tine. How, therefore, do we know what it is? The answer is partly in the survival of a name, under various morphologies that diverge with the tool’s actual shape and use. The Homeric *listron* with which Telemachos scraped the floor of the massacred suitors in *Odyssey*, 22.455, is clearly not the same tool shown in figure 1, however redrawn, any more than it is the modern Greek *lisgari* rake or harrow. In this

¹¹ H. Omont, *Evangelies avec peintures byzantines du XIe siècle*, vol. 1 (Paris, 1908), pl. 33; still the best reproduction, redrawn yet again for the jacket of Harvey, *Economic Expansion*, where it is unaccountably ascribed to the *Labours of the Month* from the St. Eugenios monastery, Trebizond.

¹² Examples in Bryer, “Agricultural Implements,” 50; for such methodological problems, see M. O. H. Carver, “Contemporary Artefacts Illustrated in Late Saxon Manuscripts,” *Archaeologia* 108 (1986): 117–45.

¹³ White, *Agricultural Implements*, 93–96 (*falx vinitoria*).

¹⁴ For example, P. Diaconu and S. Baraschi, *Păcuilul lui Soare* (Bucharest, 1977); much more is to be expected, most recently from the 7th-century Yassi Ada shipwreck.

case the *lisgari* survived along with its Pontic Greek medieval and modern name as [e]liktrin, as well as in modern Pontic Turkish practice. Such survivals present problems, too. For example, the British Institute of Archaeology at Ankara's Aşvan Project, which from 1968 recorded all facets of an ancient site on the Euphrates near Elaziğ, duly included an account of traditional agricultural implements still used there, before the place was flooded for the Keban Dam after 1972.¹⁵ But this otherwise admirable record does not mention the vital fact that it is valid only for the Bulgarian and Romanian Turks who replaced the original Armenian villagers of the place after 1922. Similarly, exemplars in "village museums" in Bucharest (Romania), Kazanlak (Bulgaria), Skyros (Greece), or Yeroskipos (Cyprus) must be treated with great caution. A recent album of more than three thousand agricultural implements from most Balkan countries illustrates nothing looking like our medieval *lisgari*.¹⁶

On such shaky ground one must tread delicately. The safest ground is the evidence of inventories and wills. To take the *lisgari* again, the widow Kalana Spelianitopoulos, crofter of Vazelon monastery, willed her *eliktrin* (along with a plowshare and two sickles) at some time in the thirteenth century in a valley where that tool is still employed today.¹⁷ For an idea of what Byzantine implements actually looked like, there is an unexpected pictorial source, besides wall paintings and Gospel illuminations: Byzantine illustrations of Hesiod's great poem of the eighth century B.C., *Works and Days*, in more than fourteen manuscripts from the tenth century A.D.¹⁸ The facts that this ancient work of "wisdom literature" is largely irrelevant to Byzantine farming, that no illustrator appears to copy another, and that most introduce and label implements not even mentioned by Hesiod give these contemporary authority. The finest example comes from Cardinal Bessarion's library. It is the autograph of Demetrios Triklinios, finished on 20 August 1316, to which he or another added an illustration before 1319 in Marc. gr. Z.464 (= 762), fol. 34r, shown in figure 2; figure 3, from the end of the fourteenth century, is a comparative display of ironmongery in Paris. gr. 2786, fol. 140r. Our tool, labeled *lisgariou*, lies horizontally beneath the cart in figure 2 and stands upright at the top middle of figure 3. Both examples are shown full faced. Without modern survivals we would not learn from this that the wooden shaft of the tool is in fact crook-backed, or, without digging with it, that the peasant puts his foot not, as with a spade, on the iron shoulders of the tines, but on the wooden heel of the shaft (they fall apart otherwise). Nor, without using it, would one realize that it weighs a

¹⁵ D. Williams, "Modern Agricultural Technology in Aşvan, *AnatSt* 23 (1973): 277–80.

¹⁶ G. Ostuni, *Les outils dans les Balkans du Moyen Âge à nos jours*, ed. A. Guillou, 2 vols. (n.p., 1986). I am as dubious of the use of this compilation, as of the reconstruction of a heavy plough from three iron scraps exhibited in Odessa (Ukraine), but the sole ard exhibited in Tirana (Albania) seems to have been reassembled more efficiently. The imperial Russian collection of medieval agricultural implements was allotted to the grand duchy of Finland, but still languishes in store in the Helsinki museum. Cf. R. E. F. Smith, "Some Tillage Implement Parts in the Zausailov Collection, National Museum of Finland," *Tools and Tillage* 4 (1983): 205–15.

¹⁷ F. Uspenskii and V. V. Beneshevich, *Vazelonskie Akty: Actes de Bazélon* (Leningrad, 1929), no. 118.

¹⁸ Bryer, "Agricultural Implements," 52–56; cf. Z. Mihail, "Southeastern European Ethnolinguistic 'Convergencies' (in the Field of Agricultural Implements)," *RESEE* 24 (1986): 179–89.

backbreaking 4.5 kg, three or four times heavier than a modern western tempered spade or fork (a Balkan vineyard hoe can weigh in at 3.5 kg). Nor without buying a modern Anatolian *lisgari* would one know the relative value of iron and wood: for the II-shaped tine of this spade-fork, the village blacksmith now charges five times as much as the village carpenter does for fashioning the wooden shaft and handle—a ratio that is at least an indication of relative medieval costs.

I have taken the example of the *lisgari* to test our sources, not only because it seems to be a peculiarly Byzantine tool, which perhaps never caught on either because it is peculiarly heavy on the peasant's muscles or peculiarly inefficient in most soils, but because it must be remembered that the basic business of turning the soil was largely done by such hand tools, rather than through the miracle of the plow, with which most studies of agricultural implements have by tradition started since Hesiod. But to begin with the heavy plow, or the elaborate water mill, may be misleading. Technological advances overrun practice. For example, the Romans elaborated gigantic ox-drawn winnowing machines, which can have had little significance if most peasants continued to winnow by hand. But we had still better begin with the plow.

The Byzantine plow was, technically, not a plow at all, but a sole ard. The only elaboration since Hesiod was the iron tip of its *hynis* share, mentioned in some wills, but its wooden point is still often simply hardened in fire. It is incapable of turning the soil, so that the scratch it makes across the soil (furrow is the wrong word) is rarely more than 12 cm deep, requiring cross-plowing, sometimes four times over, harrowing (with bundles of twigs attached to a frame), and simply endless clearance of stones, the traditional first fruit of an Anatolian field, to cairns or field boundaries. Its yoke, like the Latin *iugum*, Greek *zeugarion*, English *ox-gang*, or Turkish *çiftlik*, is a nominal measure of land, which would have been greatly extended if the Byzantine ard had been furnished with the refinements that spread throughout the western medieval world: a coulter for cutting the turf, a moldboard for turning it, and above all wheels that fixed the share at an angle, turning the machine into a true plow that is forced to dig deep. This is hard work, but it is largely transferred from the muscle of the peasant to the beasts on the yoke. I say "beasts," but this raises another variable known to anyone balancing the costs of buying a motor car: oxen are heavier and weaker, but cost less to fuel and maintain than more expensive and efficient horsepower. Humans can drag a plow too.

As anyone who has plowed with the Byzantine sole ard knows, the problem is how to stop the share erupting and just slithering across the surface of the soil, by keeping the pressure of one's foot—almost hopping—on the heel of the sole (*elyma*), along with holding down the stilt (*echette*) by hand. It is not easy, and such gymnastics do not end there, because the other problem is how to stop the oxen wandering all over the place, which is achieved by an essential accessory known to Hesiod as the *orpex* and to Byzantines as the *boukentron*. This symbol of the plowman is a goad, a stick held in the left hand (while the right steadies the stilt), to encourage the beasts by poking them from behind in their most tender parts: Triklinios illustrates this animated scene well in figure 2. The question remains: why is the western heavy plow apparently unknown

in Byzantium? An obvious answer is that it is best suited to the heavy loams of Flanders or the south Russian Donbass and would play havoc with some thin topsoils of Anatolia, which rains would wash away (manuring is another question). Western Crusaders or conquerors do not seem to have brought it substantially to the Levant or Crete. Another answer may be that most Byzantines cleared and tilled the soil with quite developed specialized hand tools, most of which are illustrated in figures 2 and 3.

For clearing trees, coppicing, slashing, and generally taming forest and scrub in the first place, there were a number of well-attested iron-shod tools, beginning with the all-purpose *axine* pickaxe in various forms. The *batokopin* was a rather specialized and still handy bramble-slasher. But the most fearsome and destructive implement was the *pelekys*, the double-edged hatchet of Varangian fame, which even appears on seals. It was a *pelekys* that St. Neilos (d. 1004) slung over his shoulder to lay waste the vineyards of Calabria (quite why no one knows, but it showed he meant business).¹⁹ In his will of 1059, Eustathios Boilas describes how he tamed his wilderness by slashing and burning: "the land was inaccessible to most people and unknown. I reduced it with *pelekys* and fire, as the psalm saith."²⁰ The psalm in question is 74:5–6: "They brought it crashing down, like woodmen plying their axes in the forest; they ripped the carvings clean out; they smashed them with hatchet and pick" (New English Bible).

After the *pelekys* had done its striking work and tree stumps had been burned out, there was a range of digging tools to hand even before thinking of a plow on such terrain. Besides the *liscari*, for example, in Macedonia in 1326/27 the *skouterios* Theodore Sarantinos willed two *sideroptya* (apparently our only evidence for iron-shod spades), 14 *tzapia* (mattocks of various kinds, with an angled blade), and 36 *dikellia* (two-pronged drag-hoes, of which one is best illustrated in the Great Palace mosaics).²¹

Following the agricultural cycle, reaping comes after digging, plowing, and sowing. When and where crops are ripe for harvest depends upon climate and geography: variables that make it impossible to reduce Byzantium to a common pattern. But for harvesting everywhere the essential implement is the *drepanon* sickle, a 30 cm crescent of tempered, sharpened, and sometimes toothed iron on a wooden handle. It is a simple, unchanging, and beautifully balanced tool, so universal that it is the symbol of the peasant, perhaps adopted by Emperor Andronikos I Komnenos (1183–85) in his curious depiction as a man of the people, on the door of the church of the Forty Martyrs in Constantinople.²² But there seems to have been no taboo against women reaping; indeed, by observation in former Byzantine lands, it seems to be where they enter the agricultural cycle. Where grain is cut at no more than 50 cm high it is a backbreaking job, done at flashing speed. Clutching a sheaf in the left hand, you bring the sickle

¹⁹ A. Guillou, "Production and Profits in the Province of Italy (Tenth to Eleventh Centuries): An Expanding Society," *DOP* 28 (1974): 92–96; cf. A. Dunn, "The Exploitation of Woodland and Scrubland in the Byzantine World," *BMGS* 16 (1992): 235–98.

²⁰ P. Lemerle, *Cinq études sur le XIe siècle byzantin* (Paris, 1922), 22.

²¹ G. I. Theodorides, *Mia diatheke kai mia dike Byzantine* (Thessalonike, 1962), 23.

²² Cf. F. Grabler, "Niketas Choniates als Redner," *JÖBG* 11–12 (1962–63): 68.

across and behind with the right. The problem is obvious: in cutting the crop you are in danger of slicing off your left-hand fingers too. The solution is obvious: wooden finger-guards (modern Greek *palamaries*) or thimbles, sometimes articulated into whole palms, sometimes with a clever hook to clutch the sheaf. I know of no archaeological, illustrative, literary, etymological, or other evidence for such finger-guards in Byzantium, but they remain so widespread and essential that we can safely assume that Byzantines wore them for their own safety too.

The *drepanon* sickle brings, like the plow, its own problem of where and why technological progress stops. In the medieval West, the scythe became common, for hay-making especially, with a blade maybe 1 m long, wielded with both hands. There is no medieval Greek word for it, or any recognizable Byzantine, but some Serbian, evidence. The scythe is about six times more efficient than a sickle, though in this case you have to watch out not to slice off your toes. Was it that Byzantine blacksmiths were simply not up to forging such a tool? Was it that a stony terrain makes it, as in parts of Scandinavia, unsuitable—for a scythe is easily broken? Or was it that the Byzantine peasant followed the well-attested and surviving practice of reaping twice, taking first the precious sheaves of grain and then cutting the straw, if he did not simply turn out his swine to grub about on the field?

After reaping comes threshing and winnowing, the business of separating the grain from the chaff, where at least the Byzantine peasant had a climatic advantage over his western or northern counterpart. Left beneath the elements, cut grain deteriorates rapidly in rain. In medieval England, for example, it was therefore largely flailed indoors and by hand—another tiring job that depends upon the muscles of the right arm. But in the Mediterranean, the circular open-air threshing floor (*aloni*) is said to be as old as the village harvest ring dance upon it; in hagiography St. Theodore of Sykeon exorcised demons howling beneath one, and in balladry it is the stage upon which *Digenis* fought Death.²³ The diameter of threshing floors, at about 10 m, is so natural and consistent that I have not thought to measure examples. But it may well be found that, like the English long-clock, whose pendulum has swung since 1666 at the precise drop of 39.1 inches, the *aloni* follows such a golden mean. In fact, threshing offers an authentically dramatic and bucolic break in the agricultural cycle, because the work is largely harnessed by beasts. Threshing floors are instantly recognizable and difficult to erase from the landscape long after they are abandoned (as in the Pontos) because new crops, such as maize, no longer require them. Yet archaeological evidence of associated flints, obsidian chips, or broken oxshoes, discarded because they have worn one way, is rarely recognized.

Basic threshing may be done simply by urging beasts to lacerate the grain (occasionally lentils), beneath their hoofs. But it is done more efficiently by tribulating it under a beast-drawn threshing sledge: the Roman *tribulum*, Greek *dokani/tykani* and Turkish

²³ *Vie de Théodore de Sykéon*, ed. A.-J. Festugière (Brussels, 1970), 89–90; *Digenes Akrites*, ed. R. Beaton and D. Ricks (London, 1993), 139, 145, 147, 148, 163; L. Cheetham, “Threshing and Winnowing—An Ethnographic Study,” *Antiquity* 56 (1982): 127–30.

duğan, which gyrates round the floor. It is usually a double-boarded affair, embedded with up to seven hundred flints and the like, upon which it is often children's work to surf. It was under the teeth of such threshing sledges that Emperor Nikephoros I supposedly tossed Bulgar babies for tribulation at Pliska on 20 July 811—Khan Krum got his revenge within a week when he toasted his boyars from that emperor's skull. The threshing sledge figures in wills, but I think only twice in Byzantine manuscript illumination, and in Anatolia does not seem to have caught the eye of a westerner before 1712.²⁴

After threshing comes winnowing, the separation on the threshing floor of the grain from the chaff. This is vigorous work: tricky too because one must stand at right angles to a steady wind, to toss it time and again so that the heavier ears fall in one pile and the lighter straw onto another. The winnower must adjust his tossing to quite small changes of the wind's strength and direction, before he has a discrete heap of grain ready for a final sieving. His tools are the *ptyon* winnowing shovel, which has a flat-fashioned blade, and two forks for heaving sheaves, which are commonly trimmed natural branches: the *dikrani* pitchfork and the *likmeteri* winnowing fork—the latter sprouts more spokes. Entirely wooden, these elegant implements are too modest to appear in wills and are unlikely to do so in archaeology, but are well illustrated; their survival is universal.

The next stage is milling. The water mill has aroused quite as much discussion as the plow. In poetry it released the energies of water nymphs to relieve the drudgery of women villagers.²⁵ I suspect that milling, like tilling, was done largely by hand too. I cannot prove it (no one can), but while the plow is not many times more efficient than the hoe, the mill is certainly a much mightier machine than the hand mill. Yet the hand mill or quern has its advantages to the peasant household. You can grind what and when you want according to domestic convenience, so saving negotiations with a miller. In any decent Anatolian general store you can still get a handy striated stone-cut quern, about 35 cm in diameter, with a wooden handle, to balance on the lap—along with other useful things, such as black whetstones or wooden packsaddles. Although the hand quern hardly shows up in Byzantine evidence, modern examples are indistinguishable from regular Roman ones. Larger mortars and pestles (Hesiod specifies three feet each), remain used for crushing pulses—Byzantines seem to have eaten their peas and beans smashed in the pod.²⁶

But, like the plow, there are mills and mills. Byzantines could presumably, like twelfth-century westerners, have graduated from the sole ard to the heavy plow. Similarly they could, like twelfth-century westerners, have adopted the more efficient over-shot water mill, of which they inherited the technology and some examples. But they stuck to the "Greek" mill of Strabo's time. What is this mill?

²⁴ *Voyage du Sieur Lucas, fait par ordre du roy dans la Grèce, l'Asie Mineure, la Macédoine et l'Afrique* (Paris, 1712), 1:131; Bryer, "Agricultural Implements," 79–80, with comparative table.

²⁵ *The Greek Anthology*, ed. W. R. Paton III (London–Cambridge, Mass., 1917), 176–79: 9.326–31; Strabo, *Geography*, 12.3.30.

²⁶ Hesiod, *Works and Days*, 11.423–36.

The common Byzantine water mill is technically a horizontal direct-drive scoop-vaned turbine. In simple terms, what happens is that a flow of water is drawn off a natural stream, diverted as much as 500 m upstream into a parallel millrace until it has built up a head, to be sent down a steep vertical flume, a chute maybe as high as 10 m, to strike the twenty-odd horizontal scoop-vanes of a wooden mill wheel obliquely, so debouching the tailrace back into the main stream down below it at an *angle*—such as appears to be depicted in a Great Palace mosaic. In turn the mill wheel in a lower chamber drives the upper millstone, or runner, through the floor of a chamber above by a direct vertical shaft locked into its lower face by a cross-fitting, or rynd. The runner lies on top of a static nether- or bed-stone on the floor on the upper chamber. Both millstones are about 85 cm in diameter; the mill wheels rather larger. My observations of this type show that the upper millstone runs at between 60 and 120 rpm, depending upon water flow: paddle-vaned mill wheels simply placed in a streambed below may drag the millstone round as sluggishly as once a minute. On the rough surface of the runner hangs a spatula, called by English molinologists a “damsel” or “dandelion,” which agitates strings attached to the mouth of a cradled hopper—an inverted pyramid—which encourages a thin flow of grain to spill into the central hole of the upper millstone, which finally emerges ground between both stones in a pile of flour on the floor of the upper chamber.²⁷

This machine may sound complex, but is, apart from the paddle-vaned mill wheel, the simplest and least efficient of all mills, which may explain why it is so widespread, from Byzantium to the American Appalachians—in southern Spain they actually claim it as a Byzantine heritage. It uses only 15–20% of the water pressure available. The rival to the “Greek” mill is the “Vitruvian” or “Roman” one, where the mill wheel is vertical, whether undershot, or, most efficient of all, overshot (i.e., the water flow starts in buckets at the top of the wheel, using its pressure to near 100% advantage). But while these can drive larger millstones, they require gearing to translate vertical into horizontal pressure, an expensive investment which in the West put milling into the hands of those who could compel peasants to use their mills (where the common charge is a proportion of the flour milled). Instead, Byzantine mills seem to have been in quite modest hands, and development was lateral—to two- or three-“eyed” mills, sometimes mentioned in charters, where stones ran together on a bench above the same flume. Windmills are more complex and unpredictable still; there is evidence for them on the Ionian coast and in the windy Aegean from the thirteenth century which may be associated with western innovation, along with the great sugarcane mills of Cyprus and Candia, whence came candy by another Arabic etymology. The colossal vertical undershot *noria*, antique irrigation wheels that still turn today in Cordoba,

²⁷ Bryer, “Estates,” 404–11; H. H. Guhan Danişman, “A Survey of Turbine-type Water-mills in the Bolu Region of the Central Anatolian Plateau,” *Journal of the Faculty of Architecture* (Middle East Technical University) 3 (1977): 17–37; R. A. Holt, *The Mills of Medieval England* (Oxford, 1988); Harvey, *Economic Expansion*, 128–34. For a 9th–10th-century “Roman” water mill in Thebes, see C. Koilakou, “Ένας βυζαντινός ύδρόμυλος στη Θήβα,” *Technologia* 9 (1999): 57–59.

Homs on the Orontes, and in the lower reaches of the Iris (Yeşilirmak), survived the Middle Ages, but I know of no Byzantine reference to the Anatolian ones.

After milling comes baking. Byzantine monastic domed ovens may confirm the surviving evidence of Anatolian village counterparts. Pastoralists had no fixed ovens at all, so ate porridge. But they may have been better off than monks and peasants, whose bread is baked to last: in at least one Anatolian village the headman stokes the oven nightly for one of thirty families' monthly supply. The trouble is that, despite the distinctions from black, through *hemilefko*, to *artos katharos* or white bread, any idea of what Byzantine bread, emmer, spelt, bulgur, wheat, barley, or rye tasted like is irretrievably lost—along with the quality of their wine.²⁸

Besides the elemental plow, it was the wonderful *hamaxa*, a single-axle beast-drawn cart and its parts, that most excited Hesiod and has puzzled both Byzantine illustrators and modern commentators. It is real enough, but Greek of any kind is unable to explain what is going on. The illustrator in figure 3 bravely interprets ancient instruction, showing a hay wagon from below, with an apology for an *apsis* or felloe. Triklinios' version in figure 2 introduces an innovation, once attested elsewhere, which you can see by looking closely at the cart wheel. Here quarter-felloes frame four truncated quadrants that leave a square opening in the center of the wheel into which an oval block, through which the axle runs, is wedged, so that any turn of the wheel locks it tighter. Was this neat, but sturdy, design the Byzantine contribution to the technology of the wheel? If so, it never caught on: modern Anatolian versions sport simple pre-Hesiodic discs, which screech across the plain.

This is the problem. Carts are good for plains, indeed they occasionally appear in Balkan wills, but do not get very far elsewhere. The standard paved and curbed Roman road is about 6 m wide, a carriageway fit for such carts. There is no standard Byzantine road, but at some time in late antiquity, pack-animal tracks (sometimes along ridges) superseded old roads (which often followed valleys). This fundamentally important general proposition is not based upon any quantifiable published evidence, for which research cries out loud, or even speculation as to whether the camel replaced the wheel in the Levant, but on simple observation from Hadrian's Wall to Armenia.²⁹ At about 1.5 m wide, the new paths were commonly ridged, even stepped to give beasts and humans a footing, and would have given carts a bumpy ride. Perhaps the most accessible surviving network of such medieval tracks is on Mount Athos, where, as in the

²⁸ M. Solomidou-Ieronymidou, "The Medieval Sugar-mill at Episkopi-'Serayia', Cyprus," in *The Sweet Land of Cyprus*, ed. A. A. M. Bryer and G. S. Georgiades (Nicosia, 1993), 430; J. C. Baroja, "Sobre le historia de la noria de tiro," *Revista de dialectologia y tradiciones populares* 11 (1955): 15–79; N. Jasny, *The Wheats of Classical Antiquity* (Baltimore, Md., 1944); Harvey, *Economic Expansion*, 167; C. Dyer, *Standards of Living in the Later Middle Ages* (Cambridge, 1989), 151–60. Vat. Ottob. gr. 210, fol. 42v in Bryer, "Agricultural Implements," fig. 15, clearly and exceptionally illustrates the distinctions between wheat and barley.

²⁹ A specific case is reported from Antalya by D. H. French, "Roman Roads and Milestones of Asia Minor," *AnatSt* 42 (1992): 5. I am grateful to J. J. Coulton and J. Crow for discussion of unpublished research.

Pontos and other parts of Anatolia, they have only recently been abandoned for modern roads and wheeled traffic.

Byzantine systems of weights and measures may reflect and confirm the first and undatable shift from the cart road to the mule track. On land, medieval people reckoned basically by yield (nominal bushels or rations like the Spanish *fanega*, or Byzantine *modios*³⁰ and *choinix*), an elastic estimate of value more useful than the surface measurement that it soon became. There are statistical scraps for taxable yields, which are no more use than trying to recover the taste of Byzantine bread. On sea, Byzantine weights were sensibly geared to capacities (such as *pithoi* or tuns) that cannot be lifted by hand or on land. In town, the *hamal* porter races colossal weights, bent double under his saddle. But in the village, dry and liquid measures were calibrated not by what can be carried by a *hamaxa* cart on the road, but by the size and weight of a brace of baskets, buckets, or pitchers that can most conveniently be balanced on the shoulders of a yoked woman (or flanks of a mule) to take the long path to market.³¹ There is no real research on these simple correlations between carriage and weight, but I suspect that it would confirm my general conclusion: that most Byzantines may have tilled the soil not with a plow but by hand, ground their grain not by a mill but by hand too, and carried their produce not on a cart but on their own and their pack animals' backs. The principal means of Byzantine production ends, as we began, with the muscle of its peasants.

³⁰ *Editor's note.* According to common scholarly opinion, the modios measured not yield but seed, i.e., 1 modios (measure of surface) of land was the land that required 1 modios (measure of volume) of seed. See, for example, E. Schilbach, *Byzantinische Metrologie* (Munich, 1970), 56ff. The term is used in this sense (seed) in the chapters on agriculture, below.

³¹ The basic work is Schilbach's *Byzantinische Metrologie*. For an example of its application for this purpose, see A. A. M. Bryer, "The Sabur or Çabur," in *Continuity and Change in Late Byzantine and Early Ottoman Society*, ed. A. A. M. Bryer and H. Lowry (Birmingham–Washington, D.C., 1986).

Mining

Klaus-Peter Matschke

The Byzantine Empire was heir to the highly developed and diversified Roman mining tradition, in which large-scale mining districts—yielding gold, silver, copper, iron, and other metals—were found alongside many small and even tiny units of production. Large mining operations controlled and managed by the state coexisted with individual and collective leaseholds on ore mines and with mining that was pursued by peasants as a secondary occupation. A complex administration had developed to organize state-controlled mining operations, to collect special property taxes from owners of ore-rich land and production levies from mine operators, gold prospectors, iron gatherers, and others involved in the extraction of ores, and to ensure that the entire output of precious metals was transferred into the hands of the state.¹

Archaeological finds reveal that this tradition continued at least into the early Byzantine period. Surface surveys and mapping of a settlement of Byzantine gold miners near Bir Umm Fawakhir in the central Eastern Desert of Egypt have recorded more than one hundred buildings and recovered extensive pottery remains that probably date back to the late fifth and sixth centuries. A number of granite blocks with faint surface depressions have also been found. The gold ore was probably crushed on these blocks in a preliminary processing step right outside the entrances to the mines on the slope of the valley in order to remove the matrix and retain the smaller quartz lumps that would repay the effort of further reduction. Rotary mills or querns may have been used to grind these lumps into finely granulated ore. This mining center in Wadi Hammamat may have been part of a large military-industrial complex that was located in the desert east of the Nile and on the Red Sea coast, complete with fortifications, waystations, and port facilities. It was from here that the early Byzantine state procured, at least for a short time, some of the precious metals it needed for its mints and imperial workshops.²

This chapter was translated by Thomas Dunlap.

¹ Cf. J. F. Healy, *Mining and Metallurgy in the Greek and Roman World* (London, 1978); J. Ramin, *La technique minière et métallurgique des anciens* (Brussels, 1977); J. C. Edmondson, "Mining in the Later Roman Empire and Beyond," *JRS* 79 (1989): 84–102.

² Cf. C. Meyer, "The Bir Umm Fawakhir Survey Project," *The University of Chicago, The Oriental Institute: Annual Report, 1992–1993*: 21–28; idem, "Gold, Granite, and Water: The Bir Umm Fawakhir Survey Project, 1992," *AASOR* 52 (1994): 37–92.

The rich gold deposits in the border regions of Armenia were so important to the early Byzantine state that the conflicts with the Persians/Sassanids, which dominated political events from the fifth to the seventh century, at times took on the character of economic wars.³ According to John Malalas, the gold was so close to the surface on some mountain slopes that it was washed out by heavy rain and could be simply picked up from the ground.⁴ It appears that the Persians initially leased ore-rich mining areas from the Byzantines. Later we also hear that sites were jointly granted to private Persian and Byzantine operators, with the annual rent of 100 pounds of gold divided between the licensors. Unilateral violations of these agreements, and the hope by both sides to exploit the mineral deposits exclusively, led to endless military clashes and weakened political control in the border areas. Around 530, a local mine operator by the name of Symeon tried to take advantage of this situation: by placing himself and his business operations under Byzantine authority he avoided paying the Persians the agreed-upon rent for the *kastron* and the mines of Pharangion. However, having done so, he also refused to hand over the gold he mined to his new masters.⁵

The existence of a special *comes metallorum per Illyricum* in the fourth century shows that mining in the Balkans was of special importance to the early Byzantine state.⁶ Archaeological research has confirmed that a small gold mine—or perhaps more likely a smeltery—protected by a rampart and tower was in operation in the region of Kraku'lu Yordan at the upper reaches of the Pek River until the end of the fourth century.⁷ Gold was panned from the sand of the Hebros and some of its tributaries already in the early Byzantine period.⁸ Fourth-century written sources mention Thracian gold prospectors,⁹ individuals expert in following veins of gold,¹⁰ and state mine administrators in Macedonia, Moesia, and in other provinces in the prefecture of Illyricum.¹¹ All these references confirm the wide distribution of mining activity and the diversity of mining operations in these core areas of the Byzantine Empire.

A number of other metals were mined in addition to gold and silver. The church father Basil of Caesarea (in Cappadocia), in a letter written in 372, described the Taurus Mountains in Asia Minor as rich in iron, and he asked Modestos, the *praefectus praetorio Orientis*, who was officially in charge of supervising the mining and supply of base metals, to reduce the taxes on iron mining (*siderou synteleian*) to a tolerable

³ S. Vryonis, "The Question of the Byzantine Mines," *Speculum* 37 (1962): 5.

⁴ *Ioannis Malalae Chronographia*, ed. L. Dindorf (Bonn, 1831), 455–56.

⁵ Prokopios, *De Bello Persico*, ed. J. Haury and G. Wirth (Leipzig, 1962), 1.15.27–29.

⁶ *Notitia dignitatum*, ed. O. Seeck (repr. Frankfurt, 1962), 13.11. Cf. O. J. Belous, "Ob upravlenii gornymi predpriiatiami v pozdrei Rimskoi i rannei Vizantiiskoi imperiiach, IV–VI vv.," *ADSV* 24 (1988): 147.

⁷ M. R. Werner, "The Archaeological Evidence for Gold Smelting at Kraku'lu Yordan, Yugoslavia, in the Late Roman Period," *British Museum Occasional Paper* 48 (1985): 219–27; cf. Edmondson, "Mining," 93–94.

⁸ P. Soustal, *Tabula Imperii Byzantini*, vol. 6, *Thrakien* (Vienna, 1991), 152.

⁹ *Theodosiani libri XVI cum constitutionibus Sirmondianis*, ed. P. Krüger, T. Mommsen, and P. M. Meyer, 2d ed., 2 vols. (Berlin, 1954), 10.19.7.

¹⁰ Ammianus Marcellinus, *Römische Geschichte*, ed. W. Seyfarth, 4 vols. (Berlin, 1968–71), 31.6.1–6.

¹¹ CIC, *CI*, 11.7.4

level;¹² the taxes in question could have been either the *ferraria praestatio* levied on local landowners or the *metallicus canon* imposed on miners and mine operators.¹³

In the seventh century, the Byzantine Empire lost a number of its most important mining regions to Arabs, Slavs, and other peoples. The political situation in the remaining parts of the empire was marked for some time by a high degree of instability, which must have greatly impeded the orderly working of ore deposits and the establishment of costly installations for extracting metals.¹⁴ Still, mining activity did not cease entirely. In the early 1960s, S. Vryonis speculated that mining continued in different forms and on a different scale,¹⁵ and recent studies on the composition of coins bear him out. They show that over the following centuries, Byzantine minting did not rely only on precious metals already minted, on hoarded and captured treasures, and on the occasional tribute in the form of foreign coinage, but that, at certain times and in certain economic situations, large amounts of newly mined gold and silver were supplied to the mints.¹⁶ However, it seems clear that the tendency toward simpler organizational forms, already evident in the early Byzantine period, intensified further and that mining was once again more closely linked to landownership and frequently was an activity that peasants pursued on the side.¹⁷ The state largely withdrew as a mining operator and limited itself essentially to controlling taxes and regulating the trade in precious metals. This led to an inevitable decline in public interest in mining. We hear nothing more about military activities aimed at safeguarding and acquiring ore beds, even if such activities may well have continued on a smaller scale.¹⁸

References to mining in the literature from the middle Byzantine period suggest very simple production methods and organizational forms. Eustathios of Thessalonike, in his twelfth-century description of the possibilities of mining, mentions only grains

¹² Saint Basile, *Lettres*, ed. Y. Courtonne, 3 vols. (Paris, 1957–66), 2: no. 110, pp. 11–12. Cf. F. Hild and H. Hellenkemper, *Tabula Imperii Byzantini*, vol. 5, *Kilikien und Isaurien* (Vienna, 1990), 1:116.

¹³ For more on these state levies, see Edmondson, "Mining," 98; J. Karayannopoulos, *Das Finanzwesen des frühbyzantinischen Staates* (Munich, 1958), 60.

¹⁴ For more on the sociopolitical conditions surrounding mining activity, see Edmondson, "Mining," 95–97.

¹⁵ Vryonis, "Mines," 16–17.

¹⁶ C. Morrisson, "Numismatique et histoire, l'or monnayé de Rome à Byzance: Purification et altérations," *CRAI* (1982): 203–23; C. Morrisson, J. N. Barrandon, and J. Poirier, "La monnaie d'or de Constantinople: Purification et modes d'altération, 491–1354," in C. Morrisson et al., *L'or monnayé*, 2 vols., Cahiers Ernest-Babelon 2 (Paris, 1985), 1:113–87; C. Morrisson, J. N. Barrandon, and C. Brenot, "Composition and Technology of Ancient and Medieval Coinages: A Reassessment of Analytical Results," *ANSMN* 32 (1987): 181–209; A. A. Gordus and D. M. Metcalf, "The Alloy of the Miliarion and the Question of the Reminting of Islamic Silver," *HBN* 24–26 (1970–72): 9–23.

¹⁷ Cf. the agricultural and mining community on the southern coast of Cyprus in the 6th/7th centuries, mentioned in an excavation report: see M. McClellan and M. Rautman, "Kalavassos-Kopetra, 1990," *AJA* 95.2 (1991): 302.

¹⁸ Theophanes, *Chronographia*, ed. C. de Boor, 2 vols. (Leipzig, 1883–85; repr. Hildesheim, 1963), 1:179, reports in the 9th century on the economic background of the Persian wars of the 6th century. His description of contemporary conflicts on the eastern border of the empire gives no indication, however, that mineral deposits and mining played any role. For information on Byzantine castles whose purpose may have been to safeguard mining activities, see, among others, F. Hild and M. Restle, *Tabula Imperii Byzantini*, vol. 2, *Kappadokien* (Vienna, 1981), 159.

of gold and silver washed to the surface by rain.¹⁹ Around 940, Niketas Magistros described coastal dwellers of the Propontis who collected lumps of iron from the sand of an estuary and roasted them first in a fire and then in a smelting furnace (perhaps to form a doughlike ball); this pig iron was then heated once again (and possibly beaten into ingots) in preparation for being worked by specialized craftsmen.²⁰ These coastal people were thus producing iron in a fashion similar to that of west European peasants of the early and high Middle Ages, whose Catalan process involved the use of bloomery hearths. Byzantine ironworkers may also have used bellows: Eustathios mentions them in another passage, naming them *akrophysia* in contrast to the *akrostomia* used by blacksmiths.²¹ The monastery of St. Phokas in Trebizond had a *proasteion* in the ninth century where iron was produced (probably by dependent peasants) and handed over to the monks (possibly as rent).²² Already during the crusades, western iron seems to have been superior in quality to Byzantine iron: Anna Komnene speaks of the *agathos sideros* ("good iron") that was used in the army of the Norman leader Bohemond I.²³ A larger number of silver, tin, and gold mines has been found by recent surveys in the Bolkar-dağ district, not far from the Byzantine fortress of Lulon. Most of them were fairly small, but at least they were still active in the eighth century.²⁴ Their existence also increases the likelihood that mining continued in the Taurus Mountains until the fourteenth century, when various mines supplied large amounts of pure silver to the area's Mongol rulers and their governors.²⁵ Recent archaeological work has revealed traces of (middle) Byzantine mining also in northwestern Asia Minor between the Hellespont and the Gulf of Adramyttion,²⁶ near Kinyra on the island of Thasos,²⁷ and near Perist-

¹⁹ *Eustathii Thessalonicensis Opuscula*, ed. F. L. Thomas (repr. Frankfurt, 1964), 251. Cf. A. Kazhdan's review of Vryonis in *VizVrem* 25 (1964): 259–61, with reference to I. P. Medvedev, "Problema manufakturny v trudach klassikov marksizma-leninizma i vopros tak nazyvaemoi vizantiiskoi manufakturny," in *V. I. Lenin i problemy istorii* (Leningrad, 1970), 407.

²⁰ Niketas Magistros, *Lettres d'un exilé, 928–946*, ed. L. G. Westerink (Paris, 1973), 65. Cf. A. M. Bryer, "The Question of Byzantine Mines in the Pontos: Chalybian Iron, Chaldian Silver, Koloneian Alum and the Mummy of Cheriana," *AnatSt* 32 (1982): 133.

²¹ *Eustathii metropolitae Thessalonicensis commentarii ad Homeri Iliadem*, ed. G. Stallbaum, 4 vols. (repr. Hildesheim, 1960), 3:83. Cf. G. Weisgerber and C. Roden, "Griechische Metallhandwerker und ihre Gebläse," *Der Anschnitt* 1 (1986): 5.

²² A. Papadopoulos-Kerameus, "Συμβολαὶ εἰς τὴν ἱστορίαν Τραπεζοῦντος," *VizVrem* 12 (1906): 140. Cf. A. Kazhdan, *Derevnja i gorod v Vizantii IX–X vv.* (Moscow, 1960), 192.

²³ *Anne Comnène, Alexiade*, ed. B. Leib, 3 vols. (Paris, 1937–45), 3:225. Cf. P. Schreiner, "Zur Ausrüstung des Kriegers in Byzanz, im Kiewer Rußland und in Nordeuropa nach bildlichen und literarischen Quellen," *Figura* 19 (1981): 225.

²⁴ K. Aslıhan Yener and A. Toydemir, "Byzantine Silver Mines: An Archaeo-Metallurgy Project in Turkey," in *Ecclesiastical Silver Plate in Sixth-Century Byzantium*, ed. S. A. Boyd and M. M. Mango (Washington, D.C., 1993), 155–68; Edmondson, "Mining," 101 n. 143.

²⁵ Cf. Vryonis, "Mines," 8. To the sources mentioned we should add K. Jahn, *Die Frankengeschichte des Rašid ad-Dīn* (Vienna, 1974), 45.

²⁶ E. Pernicka et al., "Archaeometallurgische Untersuchungen in Nordwestanatolien," *JbZMusMainz* 31 (1984): 533–99.

²⁷ G. Weisgerber and G. A. Wagner, "Die antike und mittelalterliche Goldgewinnung von Paläochori bei Kinyra," in *Antike Edel- und Buntmetallgewinnung auf Thasos = Der Anschnitt*, suppl., 6 (1988): 141, 152.

era outside Thessalonike;²⁸ even the first elements of a specifically Byzantine mining technology have come to light.²⁹ We know that the Byzantines also took a strong interest in buried treasures. But while the royal claim to the ownership of treasure trove became a source for the royal mining regale and the freedom to prospect in the West during the high Middle Ages,³⁰ comparable developments did not occur in the *heuresis thesaurou* in Byzantium, or at least were unable to make headway.³¹

Numerous written sources from the middle Byzantine period attest the existence of separating works for the production of refined gold (*chrysepseteia*) or experts engaged in gold purification (*chrysoepsetai*),³² albeit not at the gold mines themselves but instead near the mint in the capital; evidently these activities were distinct from the mint itself. These installations are undoubtedly identical with the *chrysoplysia* mentioned by Niketas Choniates,³³ while the *chrysochoeion* was more likely the imperial jeweler's workshop, which was run by a special archon.³⁴ During the middle Byzantine period, as well, a special *zygostates* was charged with monitoring the purity of precious metals.³⁵

The disintegration of Byzantium into a number of component states beginning in the early thirteenth century created new constraints on the development of mining. We are not certain where the empire of Trebizond obtained the silver to mint its silver coins. Since the gold content of fourteenth-century silver coins from Trebizond is higher than in comparable coins from the thirteenth century, Trebizond is more likely to have had its own silver mining during this period, but so far the locations of these mines is a matter of conjecture.³⁶ It is highly unlikely, though not impossible, that the surge in Balkan mining initiated by Saxon miners still reached the empire of Constantinople—restored in 1261 and, from the early fourteenth century on, limited to its European lands—during the last hundred years of its existence.³⁷ Dendrological analysis of charcoal remains in the area of Siderokauseia on the Chalkidike do not rule out the possi-

²⁸ K. Theocharidou, “Εγκατάσταση βυζαντινού ορυχείου στην Περιστέρα της Θεσσαλονίκης,” in Πέμ-
πτο Συμπόσιο Βυζαντινής καί Μεταβυζαντινής Αρχαιολογίας καί Τέχνης: Περιλήψεις ανακοινώσεων
(Athens, 1985), 27–28; cf. AA 42 (1987): 408.

²⁹ Cf. Pernicka, “Archaeometallurgische Untersuchungen,” 571.

³⁰ Cf. D. Hägermann, “Deutsches Königtum und Bergregal im Spiegel der Urkunden,” *Der An-
schnitt*, suppl., 2 (1984): 13–23.

³¹ Cf. C. Morrisson, “La découverte des trésors à l’époque byzantine: Théorie et pratique de
l’heuresis thesaurou,” *TM* 8 (1981): 322–43, and G. G. Litavrin, *Vizantijskoe obščestvo i gosudarstvo v
X–XI vv.* (Moscow, 1977), 133, 199.

³² *Georgii Acropolitae Opera*, ed. A. Heisenberg, corr. P. Wirth, 2 vols. (Stuttgart, 1978), 1:163. Mor-
risson, Barrandon, and Poirier, “La monnaie d’or,” 127, with references.

³³ *Niketae Choniatae Historia*, ed. J.-L. van Dieten (Berlin–New York, 1975), 347. The different terms
used to describe these *ateliers de purification*—“gold washing” and “gold boiling”—may indicate differ-
ent *méthodes d’affinage*. For more information, see R. Halleux, “Méthodes d’essai et d’affinage des
alliages aurifères dans l’Antiquité et au Moyen Âge,” in Morrisson et al., *L’or monnayé* (as above, note
16), 39–77.

³⁴ In contrast to the view of Morrisson, Barrandon, and Poirier, “La monnaie d’or,” 127.

³⁵ *Ibid.*

³⁶ Bryer, “Mines,” 138–46.

³⁷ On this question I am not as certain as L. Maksimović, “Charakter der sozial-wirtschaftlichen
Struktur der spätbyzantinischen Stadt, 13.-15. Jh.,” *JÖB* 31.1 (1981): 160 n. 53.

bility that the new developments in what was later to become a center of mining began as early as the fourteenth century.³⁸ However, when the first Greek owners of modern mining works appear in the written sources, the area was no longer in Byzantine hands.³⁹ Although iron mining and iron smelting furnaces are attested in various areas during the late Byzantine period,⁴⁰ the reforms proposed for the Peloponnese by the Byzantine bishop and Latin cardinal Bessarion indicate that the technology of water-powered bellows and mechanical mills for extracting ores and processing metals had not reached the Byzantine provinces even by the fifteenth century.⁴¹ The mining of alum in Nea Phokaia on the west coast of Asia Minor, in the interior of Anatolia, and in various European coastal regions of the Aegean was for the most part also a post-Byzantine development and began with the appearance and settlement of Italian entrepreneurs in these mining areas.⁴² Nevertheless, one could still grow rich from the exploitation of gold and silver mines in the late Byzantine period, as the aristocrat John Laskaris Kalopheros did around the middle of the fourteenth century.⁴³ And when Theodore Moschampar administered the *chrysepseteion* in Constantinople around 1310, perhaps for a *syntrophia* of leaseholders or beneficiaries, his acquaintances expected that he would now be able to pay off older debts.⁴⁴ Not one but several *chrysepilektai* are attested in Thessalonike a short time after, and they, too, belonged to the city's upper classes.⁴⁵

While the late Byzantine state progressively lost its influence over mining and metal processing and was unable to enforce the ban on the export of precious metals, a few late Byzantine groups of entrepreneurs seem to have made at least modest profits from the processing and sale of metals extracted from the remaining ore deposits in the empire. Some individuals even managed to become involved in the development of mining beyond the borders of the ever-shrinking empire.⁴⁶

³⁸ G. A. Wagner et al., "Archäometallurgische Untersuchungen auf Chalkidiki," *Der Anschnitt* 5/6 (1986): 167f.

³⁹ *Actes de Xéropotamou*, ed. J. Bompaire, Archives de l'Athos (Paris, 1964), 214–18 (no. 30). Cf. K.-P. Matschke, "Zum Anteil der Byzantiner an der Bergbauentwicklung und an den Bergbauerträgen Südosteuropas im 14. und 15. Jahrhundert," *BZ* 84/85 (1991–92): 54ff.

⁴⁰ Cf. A. Guillou, "Siderokausia," 2 vols. (unpublished manuscript, Paris, 1977–79); J. J. Vin, "Sel'skoe remeslo i promysly v pozdnei Vizantii, XIII–XV vv.," *VizVrem* 48 (1987): 86f.

⁴¹ L. Mohler, *Aus Bessarions Gelehrtenkreis* (Paderborn, 1942), 448 (no. 13).

⁴² Bryer, "Mines," 146–49.

⁴³ *Démétrius Cydonès, Correspondance*, ed. R.-J. Loenertz (Vatican City, 1956), 1:104–7 (no. 73). Demetrios Kydones, *Briefe*, trans. F. Tinnefeld, vol. 1, pt. 1 (Stuttgart, 1982), 336 n. 16.

⁴⁴ *Georgii Lacapeni et Andronici Zaridae Epistolae XXXII cum epimerismis Lacapeni*, ed. S. Lindstam (Göteborg, 1924), 145–47 (no. 23); cf. S. I. Kourouses, *Tò épistoláριον Γεωργίου Λακαπηνού—'Ανδρονίκου Ζαρίδου (1299–1315 ca.) καὶ ὁ ἱατρὸς: Ἀκτουάριος Ἰωάννης Ζαχαρίας* (Athens, 1984), 355 f, whose interpretation of this part of the letter differs somewhat from mine.

⁴⁵ *PLP* 5:10015, 10:24078.

⁴⁶ Matschke, "Zum Anteil," 57ff.

Metallurgy and Metalworking Techniques

Maria K. Papathanassiou

The art of metalworking in Byzantium was heir to an ancient tradition transmitted by age-old techniques developed in antiquity in the broad area of the eastern Mediterranean.¹ Various metal objects dating from the Bronze Age and found in excavations in Greece, on the coasts of Asia Minor, and in Egypt bear witness to this long tradition. A good deal of data regarding the techniques of metalworking is found in the form of literary descriptions in the ancient texts. For example, in the *Iliad* (18.369–79, 410–17, 468–77) there is an excellent description of the forge of Hephaistos, the blacksmith god, with much information on the way he was working, the kind of metals he used, and the techniques he employed to make the shield of Achilles. On the other hand, representations of the work carried out in mines and in workshops appear in ancient Greek black-figure and red-figure vase painting. Some of these workshops were simple forges for fashioning weapons and tools, while others were the workplace of true artists, where bronze statues were cast² and marble statues were covered with ivory or gold.

These techniques, transmitted from generation to generation, survived and were improved over time. From the Hellenistic age on, the desire for luxuries and for conspicuous wealth extended into the lower social strata. As a result, there was increased need for the production of luxury goods, albeit at moderate price. Gold and silver-smiths sought techniques that would allow them successfully to make precious metal alloys and imitate precious and semiprecious stones. Already in the early fourth century, the papyri of Leiden and Stockholm³ include recipes that refer primarily to various techniques for processing gold and silver, in particular: (a) “doubling” (δίπλωσις), which must be understood as a decrease in the degree of purity of an alloy of a precious metal without a change in its color, rather than a doubling of the mass of the metal itself); (b) dyeing (βαφή), dipping hot metals into a cold liquid, usually water, to harden

¹ M. Papathanassiou, “Ἀρχαία μεταλλοτεχνία καὶ φυσικὲς θεωρίες ὡς βάσεις τῆς ἐλληνικῆς χημείας,” Ἡ ἱστορικὴ ἐξέλιξη τῆς Χημείας στὴν Ἑλλάδα, *Proceedings of the Panhellenic Symposium of the Association of Greek Chemists, October 14–15, 1994* (Athens, 1996), 35–53.

² *I bronzi di Riace* (Novara, 1981).

³ R. Halleux, *Les alchimistes grecs*, vol. 1, *Papyrus de Leyde, Papyrus de Stockholm, Fragments de recettes* (Paris, 1981).

them);⁴ (c) making black silver;⁵ (d) gilding and silvering metal objects; (e) methods of testing the purity of the metals; (f) book illumination with gold and silver (χρυσογραφία/ἀργυρογραφία); (g) the processing and imitation of precious and semiprecious stones; and even (h) dyeing cloth.

Technical recipes found in chemical Byzantine codices dated from the tenth to the fifteenth century⁶ refer to the same branches of metalworking, especially to gold and silverwork. The content of these codices is related to that of the papyri mentioned above. On this basis we can distinguish the following groups of recipes: (a) dyeing copper and iron, the manufacture of dies (τυπάρια), thin gold leaves (χρυσοπέταλα), and so on; (b) cleaning pearls and methods for making imitation pearls; (c) the work of the goldsmith, especially refining (purifying) and welding gold and silver, illuminating books with gold and silver, and making wires.⁷

In these texts, which are authentic sources for the materials and tools employed as well as for the relevant techniques to the end of the fifteenth century, one may glimpse the effort of the craftsman to hide the secrets of his art, even when he seems to be revealing them. For this reason, although most recipes mention the general method of the work and the materials used, they omit the proportions of materials in various types of work; that is, they omit the most important information for creating a metal object successfully.

It is worth examining in detail some basic techniques such as iron tempering,⁸ that is, hardening it so that it becomes steel. In this recipe we are given the proportions of the materials used for smearing over the point or edge (ἐπάλειψη τοῦ στόματος) of iron. Special mention is made of “Indian iron,” which was tempered through a better method. An important distinction is made between the method of tempering (hardening) tools for stone carving, which do not need a sharp edge, and sharp knives and swords. There is also mention of an “Indian method for tempering iron,” which is said to have been invented by Indians and received through the Persians; the mention is dated to some year (not stated precisely) of Philip’s era.⁹ The same vagueness as to chronology is found in a recipe for dyeing copper, attributed to the Persians.

The *Souda* lexicon (ca. 11th century) states that chemistry (χημεία)¹⁰ is the making

⁴ Homer, *Od.* 9.391–93, describes the temper of iron as it becomes steel, and mentions the great scream (μέγα ἰάχοντα) of the burning metal when it is dipped into water. In the papyrus of Leiden, there are recipes for the temper of silver (Halleux, *Alchimistes grecs*, 99 §65) and gold (*ibid.*, 102 §78, 100 §67).

⁵ A. R. Giumlia-Mair and P. T. Craddock, *Das schwarze Gold der Alchimisten: Corinthium aes* (Mainz am Rhein, 1993).

⁶ M. Berthelot and C. Ruelle, *Collection des anciens alchimistes grecs*, 3 vols. (Paris 1888; Osnabrück, 1967) 2:321–93 (technical treatises).

⁷ M. Papathanassiou, “Αλχημεία ἢ χημικὴ τεχνολογία,” *Ινδικτος* 7 (1997): 97–119.

⁸ Berthelot and Ruelle, *Anciens alchimistes*, 2:342.20–345.23.

⁹ This is in a chronological system introduced in Egypt after its conquest by Alexander the Great. The first day of the era is 12 November 324 B.C.

¹⁰ The word χημεία is found in ancient Greek and Byzantine texts. According to Plutarch (*De Iside et Osiride*, 33) it means “the black earth of Egypt.” In conjunction with the Arabic article *al-*, it becomes *ἀλχημεία* (alchemy), which appeared as a new word in the Latin West through the translations of the relevant texts from the Arabic to Latin.

of gold and silver, old books regarding which were burned by order of Diocletian (284–305).¹¹ This should probably be related to Diocletian's fiscal reform, in which he also included the monetary system of Egypt. The striking of gold and silver coins with the image of the emperor was an exclusive imperial privilege, and those who encroached upon it were heavily punished.¹²

For this reason, a unique recipe in the oldest chemical codex, Marcianus gr. 299 (10th–11th century), assumes great significance. It describes in detail the general method of making dies (τυπάρια), that is, bronze molds (φοῦρμαι) and reliefs (τύλοι) for any coin (λαβὼν νόμισμα οἶον θέλεις).¹³ The figure of the coin in relief (ἐκτύπωμα) is made with common sulfur (τεάφιον κοινὸν ἐψητόν), which is baked in a low fire (ἐλαφρὸν πῦρ) so that the impression of the coin is good and the sulfur does not burn. The materials used for the casting (χώνης) of the dies (τυπαρίων) are an iron ring (στεφάνιον σιδηροῦν), sifted quicklime (κονία κοσκινισμένη), ashes, and bronze. In this case the constituents of the bronze alloy (ἡ συγκέρασις τοῦ βροντησίου)¹⁴ are verdigris (ἰδς)¹⁵ from Cyprus (which produced the best copper) and pure tin in a proportion of 1:2 pounds; the constituents of the coloring of the coin (χρώσις τοῦ χαράγματος) are a solution of 2 pounds of blue vitriol (χάλκανθος),¹⁶ 1 pound of copper ore (χαλκίτις),¹⁷ 2 pounds of alum (στυπηρία),¹⁸ 7 pounds of yellow ocher,¹⁹ and salt. After the workers

¹¹ *Suidae Lexicon*, ed. A. Adler, 4 vols. (Leipzig, 1928–35), 4:804, s.v. χημεία: ἡ τοῦ ἀργύρου καὶ χρυσοῦ κατασκευή: ἥς τὰ βιβλία διερευνησάμενος ὁ Διοκλητιανὸς ἔκαυσεν; 2:104, s.v. Διοκλητιανός: ὅτε δὴ καὶ τὰ περὶ χημείας ἀργύρου καὶ χρυσοῦ τοῖς παλαιοῖς γεγραμμένα βιβλία διερευνησάμενος ἔκαυσε, πρὸς τὸ μηκέτι πλοῦτον Αἰγυπτίους ἐκ τῆς τοιαύτης περιγίγνεσθαι τέχνης, μηδὲ χρημάτων αὐτοὺς θαρρῶντας περιουσίᾳ τοῦ λοιποῦ Ῥωμαίοις ἀνταίρειν.

¹² *Codex Theodosianus*, ed. P. Krüger and T. Mommsen, I.2 (Berlin 1904; repr. 1971), bk. 9.21–23. P. Grierson, “The Roman Law of Counterfeiting,” in *Essays in Roman Coinage Presented to Harold Mattingly*, ed. R. A. G. Carson and C. H. V. Sutherland (Oxford, 1956), 240–61. M. Hendy, *Studies in the Byzantine Monetary Economy c. 300–1450* (Cambridge, 1985), 320–24.

¹³ Berthelot and Ruelle, *Anciens alchimistes*, 2:375.9–377.6.

¹⁴ Βροντήσιος (bronze) most likely derives from the Persian word *biring* (copper); D. Goltz, *Studien zur Geschichte der Mineralnamen in Pharmazie, Chemie und Medizin von den Anfängen bis Paracelsus* (Wiesbaden, 1972), 188.

¹⁵ Dioscorides, *De materia medica*, ed. M. Wellmann (Berlin, 1914), 5.79: (p. 49, line 4) ἰδὼν δὲ τὸν ξυστὸν οὕτως σκευαστέον; (p. 51, lines 17–18) ὁ δὲ [ἰδς] τῶν χρυσοχόων ἀνάλογος τῷ ξυστῷ. This is verdigris $[(\text{CuC}_2\text{H}_3\text{O}_2)_2 \cdot \text{H}_2\text{O}]$, which is transformed into malachite $[\text{CuCO}_3 \cdot \text{Cu}(\text{OH})_2]$ by the action of air and water.

¹⁶ Χάλκανθος is hydrate copper sulfate, commonly blue vitriol ($\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$), or hydrate ferrous sulfate ($\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$). Goltz, *Geschichte der Mineralnamen*, 152–54, 200.

¹⁷ Diosc., *De materia medica*, 5.99. According to Pliny the Elder (*Naturalis historia*, 34.117, 120, 121), χαλκίτις contains copper, μίσυ, and σῶρι, and it is very likely copper pyrites (CuFeS_2). The μίσυ contained in the χαλκίτις could be ferrous sulfide (FeS_2). Σῶρι, which is usually mentioned with μίσυ, could be copper sulfide (CuS). Berthelot and Ruelle, *Anciens alchimistes*, 468–69: σῶρι ἐστὶν ὡς κυανὸς ψωρώδης, εὐρισκόμενος αἰεὶ ἐν τῷ μίσυ. τοῦτο καὶ χλωρὸν χάλκανθον καλοῦσιν. Goltz, *Geschichte der Mineralnamen*, 154–57.

¹⁸ In Egypt there are all kinds of στυπηρία, i.e., σχιστή, στρογγυλή, ὑγρή, but it is also found in other countries. Diosc., *De materia medica*, 5.106. Goltz, *Geschichte der Mineralnamen*, 161.

¹⁹ This is limonite ($2\text{Fe}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$), which is also called σχιστόν. Diosc., *De materia medica*, 5.93. Goltz, *Geschichte der Mineralnamen*, 147–48.

have ground these materials, sifted them, and piled them in layers in a covered pot, as is done with the thin gold leaves made by artisans who smelt gold (φύλλα τῶν χρυσοσηπητῶν),²⁰ they bake them for three hours. After these baked pieces, that is, the colored φάκια, have cooled down, they are washed with pure water, and then the artisans, after having oiled their hands, rub them with sulfur.

This technique for making a die (τυπάριον) can be used for striking either a genuine or a false gold coin, depending on whether the work is done in the imperial mint or by counterfeiters. But, as the law against counterfeiting makes clear, the metalworkers of the imperial mints themselves were so involved in counterfeiting that they were considered as the main source of false coinage and were punished more severely than private persons.²¹ If, however, they struck coinage themselves with tools stolen from the mint, and the coins had the legal composition and form, then the metalworkers were punished only for theft. In any case, the main purpose of the law against hoarding old bronze coins was to reduce the metal available for making dies, which could then be used for forgery.²²

In our text the coin whose manufacture is being discussed is the gold coin (όλοκοττινον, solidus) because of its high value (πάνυ χρήσιμος ἐκβαίνει ἡ ἀποτύπωσις τοῦ ὀλοκοττινίου). However, the same bronze used for the casting of the die (εἰς αὐτὴν τὴν ἀποτύπωσιν μεταβάλλεις τὸ αὐτὸ βροντήσιον) of the gold coin as a copper alloy is appropriate for use in creating imitations of gold; and the text gives instructions for the coloring of the φάκια. In cod. Paris. gr. 2327, copied in 1478, there is a description of the fashioning of a mold for a solidus (φοῦρμας ὀλοκοττινίου) made of an alloy of metals by the wax method; on this they pour silver and verdigris ground and dissolved in lemon juice.²³

The importance of metalworking in Roman and Byzantine finances may be seen not only from the relevant provisions of the Theodosian and Justinianic codes, but also from another very important text that belongs to the first group of recipes and is entitled *Differences of Lead and Gold Leaf* (Διαφοραὶ μολίβδου καὶ χρυσοπετάλου).²⁴ This account book of a goldsmith's workshop mentions the raw materials and combustibles needed, as well as the productivity of the workshop, listed according to the daily production of its craftsmen, specialists in various areas of goldwork. In this text we can clearly see the craftsmen's specializations with their names, as well as the kind of work the artisans produce.

At the start, a distinction, based on provenance, is made among the various kinds of lead used in different alloys. The sea lead (μόλυβδος θαλάσσης) is hard and dirty; to

²⁰ *Chrysoepsetes* or *archon tes kharages*: Hendy, *Studies*, 427 n. 245. See also K.-P. Matschke, "Mining," *EHB* 116.

²¹ Grierson, "Counterfeiting," 254 n. 3. Cf. Berthelot and Ruelle, *Anciens alchimistes*, 2:239.12–240.2: ὥσπερ οἱ τεχνῖται οἱ ἐπιστάμενοι βασιλικὸν τύπτειν νόμισμα οὐχ ἑαυτοῖς τύπτειν, ἐπεὶ τιμωροῦνται.

²² Grierson, "Counterfeiting," 246, 252–53.

²³ Berthelot and Ruelle, *Anciens alchimistes*, 2:326.12–26.

²⁴ *Ibid.*, 377.7–379.23.

make it less fragile they make an alloy of 50 pounds of lead σαβυήσιος and 1 pound of white tin. The lead σαβυήσιος and the lead from Dalmatia (δελματήσιος) are pure and soft, while the lead from Sardis (σαρδιανός) is soft and contains copper (ἔγχαλκος). It is evident that the reference to lead is made because there is a method of extracting silver from the very firm (πυκνότατον) lead cast from the results of sand washing (μόλυβδον χυτὸν ἀπὸ τῶν ἀμμοπλύτων), which yields 1 pound of silver per 10 pounds of common pure lead (κοινὸν καθαρὸν μόλυβδον).²⁵

The text then mentions the quantities of necessary metals, the other materials, and the combustibles for various jobs carried out in the workshop, which are carried out by special artisans. There are artisans for fashioning molds, artisans who specialize in work convected with crucibles for melting gold or silver, and artisans for filing and working with tongs (τεχνῖται εἰς πλάσιν καὶ χώνην καὶ ῥινὴν καὶ ἀρπακτῆριν). Along with forty men who work the bellows (ἐργάτας φυσηλάτας), they can produce about 5 pounds of gold and silver cakes (χρυσολιθαρίου/ἀργυρολιθαρίου) per day. There are also artisans called “goldbeaters” (πεταλουργοὶ or χρυσηλάται), who hammer gold or silver in thin leaves (πέταλα), which will later be used for silverplating (περιαργυρώσεως) and gilding (χρυσώσεως). From one cake of gold (χρυσολιθάριον), the gilder (χρυσωτής) makes in one day 150 leaves for gilding entire objects (χρύσωσις ἐν ὅλοχρύσῳ), plus 50 leaves for book illumination with gold (χρυσογραφία) and 100 leaves for gilding the edges of objects (χρύσωσις ἐν ἀκροχρύσῳ). It is also mentioned that 1 pound of gold produces 72 gold coins of the type called εὐρυζον.²⁶

Because the material loses weight (ὕποχωρεῖ) when it is processed, that is, a part of it is lost, the artisans are given a larger quantity of material, in which the future loss has already been calculated. Thus the goldbeater receives material that includes whatever is expected to be lost, by pound of weight, as the gold is melted and then made into leaves (σὺν τῆς ὕλης καὶ τὰ ὑποχωροῦντα εἰς τὴν ἔψην τῶν χρυσίου καὶ τὸν ἐκπεταλισμὸν καθ’ ἐκάστην λίτραν); this additional amount is six gold coins per pound, since the loss is calculated as 2 keratia per nomisma (ὥς κατατρέχει εἰς τὸ νόμισμα κεράτια δύο).²⁷ For gilding only, the gilder receives an additional amount of three gold coins per pound of the object, because the loss is one keration per nomisma; for preparing the foundation layer on an object for gilding (ὑπόχρησιν ἥτοι ὑποσκευὴν χρυσώσεως), in the case of small statues the gilder receives three coins per pound if he uses wood and one coin per pound if he uses stone. If the gilder is an independent artisan (αὐτό-

²⁵ Ibid., 36.19–37.16.

²⁶ This is the same as ὀβρυζον, i.e., gold that, according to Pliny (33.59), has been purified by fire; hence the arabic name *ibriz* for pure (purified) gold. Goltz, *Geschichte der Mineralnamen*, 188, 256. Cf. *obryzon kharagma*: Hendy, *Studies*, 350–51, 355. R. Halleux, “Méthodes d’essai et d’affinage des alliages aurifères dans l’Antiquité et au Moyen Age,” in C. Morisson et al., *L’or monnayé*, vol. 1, *Purification et altérations de Rome à Byzance*, Cahiers Ernest-Babelon 2 (Paris, 1985), 48.

²⁷ The 2 keratia result from the combination of 1½ keration per nomisma *hyper obryzes* (designed specifically to recover the difference between the theoretical and the actual weights of coins) and ½ keration per nomisma *hyper rhopes* (the largest fee, apparently for weighing the coins involved in a transaction), later termed *idiotikos zygos* and *chrysochoikos stathmos*, as it is deduced from the papyri of Oxyrhynchus (late 6th century/early 7th century) in Egypt. Hendy, *Studies*, 352–53.

διον ἐργάζεται) and creates objects described in other account books (καθὼς ἐλογίσθη ἐν πολλαῖς λογοθεσίαις), the prices change; the text gives price examples by reference to work already done in well-known buildings.

This text indicates that the metals used in the workshop were gold, silver, copper of excellent quality, tin, and various kinds of lead after special processing. Other materials used were sulfur, copper ore, *misý, sinopis*,²⁸ gypsum,²⁹ *rubrica*, and *artemisia indica*. There was also wax, oil, material for hardening iron (στόμωμα), fish glue (ἰχθυόκολλα), glue made from bull's hide (ταυρόκολλα), gum (κόμμι), ψαρικά (obviously the material used for the making of fish glue), and other materials of unknown composition such as σαβανικά and σοφίγυ. Finally, coal and wood were used as combustibles. The weights and measures used were the λίτρα (litra), the κεντηνάριον, the ξέστης (sextarius), the modius, the ἀμαξεία (a wagon load), the δάκτυλος, the πῆχυς, and the ἐξάγιον. The coin that is mentioned is the ὀλοκόπτινον or χρύσινον or εὐρυζον.

The techniques of metalworking and especially those of gold and silversmithing are much more ancient than the written tradition related to them, since they are transmitted empirically from generation to generation; this can be proved by a comparison of the techniques encountered in archaeological finds with those described in philological sources.³⁰ The texts extant in Byzantine manuscripts suggest that some techniques were influenced by those of Persia and India, evidently after the creation of Alexander the Great's immense empire, while others betray Arab influence. As far as coinage is concerned, the high quality of Roman coins and their purity at the end of the fourth century prove both the financial strength of the state and the high level of metalworking techniques. These were used not only for making weapons, tools, gold and silverware, and jewelry, but also for manuscript illumination and for the decoration of various buildings (e.g., palaces and churches³¹), especially with gold. That the luxury of Byzantine palaces rivaled that of the Arab caliphs³² and the Latin kings was a result of the excellent quality of the work of experienced craftsmen. Since ancient times, the workshops for metalworking, especially in gold and silver, and the guilds of the related artisans not only contributed to the economy but also to the political and cultural brilliance of the states involved.

²⁸ It is very likely that the reference is to the *sinopis* (red ocher/earth, *rubrica*), which is collected from the caves of Cappadocia and transferred to and sold in Sinope. The τεκτονικὴ *rubrica* is much inferior to *sinopis*; the best *rubrica* is found in Egypt and Carthage. Diosc., *De materia medica*, 5.96. Goltz, *Geschichte der Mineralnamen*, 150–51.

²⁹ This is calcium sulfate (CaSO_4), whose color varies from white to gray and light blue; in hydrate form ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$), it is white or colorless. Goltz, *Geschichte der Mineralnamen*, 172–73.

³⁰ J. Ogden, *Ancient Jewellery* (London, 1992).

³¹ Berthelot and Ruelle, *Anciens alchimistes*, 2:37.10–11: Εἰ δὲ βούλει εἰς ἔργον ἐκκλησίας ποιῆσαι. For ecclesiastical silverplate, see S. A. Boyd and M. M. Mango, eds., *Ecclesiastical Silver Plate in Sixth-Century Byzantium* (Washington, D.C., 1992). See also A. Cutler, "The Industries of Art," *EBH* 546ff, 558ff.

³² K. Vogel, "Byzantine Science," *The Cambridge Medieval History*, vol. 4, pt. 2 (Cambridge, 1967), 269–70. H. Hunger, *Die hochsprachliche profane Literatur der Byzantiner*, 2 vols. (Munich, 1978), 2:237–39.

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Marble and Stoneworking in Byzantium, Seventh–Fifteenth Centuries

Jean-Pierre Sodini

The early Byzantine period was marked by a substantial exploitation of quarries, linked to a significant construction boom whose origins lay undoubtedly in the building of Constantinople and its stunning triumph as the capital of the Eastern Roman Empire. To be sure, the quarries of the Aegean and of Asia Minor had already been substantially worked during the Roman period; the new center of power only reactivated the quarrying of known sources,¹ whose production had been momentarily interrupted by the crisis in the second half of the third century.

The Prokonnesian quarries had already been worked under Hadrian, who made them dependent on the imperial treasury. Numerous pieces of sculpture found at the site are evidence of this development. Exports of architectural sculpture—in particular to new capitals such as Leptis Magna under the Severi—and the garland sarcophagi of the second half of the second century and the first half of the third were early testimony to the productive capacity of the island. Diocletian's transformation of Nikomedeia into a tetrarchic capital was a prelude of sorts to the ultimate mission of the Prokonnesian quarries: to cloak the new capital in marble so that the glory of Constantinople would blaze out to all reaches of the Mediterranean.²

N. Asgari's perseverance in surveying the Prokonnesian quarries³ has provided us

This chapter was translated by Charles Dibble.

¹ The basic text, despite certain lacunae regarding Byzantium, remains incontestably that of R. Gnoli, *Marmora romana*, 2d ed. (Rome, 1988). I was not able to consult G. Borghini, ed., *Marmi antichi* (Rome, 1992). The majority of Byzantine texts that discuss marble have been assembled, translated, and annotated by C. Mango in *The Art of the Byzantine Empire, 312–1453* (Englewood Cliffs, N.J., 1972), s.v. “marble.”

² The studies of J. B. Ward-Perkins have been critical in understanding the importance of these quarries. Cf. *Marble in Antiquity: Collected Papers of J. B. Ward-Perkins*, ed. H. Dodge and B. Ward-Perkins (London, 1992).

³ N. Asgari, “Objets de marbre finis, semi-finis et inachevés de Proconnèse,” in *Pierre éternelle du Nil au Rhin: Carrières et préfabrication*, ed. M. Waelkens (Brussels, 1990), 106–26; eadem, “The Prokonnesian Production of Architectural Elements in Late Antiquity, Based on Evidence from the Marble Quarries,” in *Constantinople and Its Hinterland*, ed. C. Mango and G. Dagron (Aldershot, 1995), 263–88; eadem, “Prokonnesos, 1993: Çalışmaları,” *XII Araştırma Sonuçları Toplantısı* (Ankara, 1994): 99–121.

with an extremely rich sampling of pieces in all phases of their production. The island made pieces to order, tied to the large-scale municipal building programs of Theodosios I and his family, notably elements for one of the triumphal arches of the Forum Tauri and the historiated column of the emperor himself. Prokonnesos also manufactured column shafts of standard size, together with column bases and capitals. With respect to the latter, the Corinthian capital represents a highly standardized product line, whose crafting process Asgari has reconstructed with great skill, showing the extent to which fifth-century capitals differ with respect to their stages of production from those of the second century.

These sculptures were widely exported and were copied, both imitatively and in a cruder style, in other varieties of marble. In addition to architectural elements that appear with some frequency (Corinthian capitals, basket capitals of one style or another, panels decorated with a central chrismon flanked by crosses), we also find a smaller number of other pieces, such as ciboria or ambos. These may reveal interesting local variations, as is the case, for example, of the fan-shaped ambos modeled undoubtedly after the Rotunda of St. George, which appear at Philippi and at Nea Anchialos; others are peculiar to Phrygia. Altar tables and round or horseshoe-shaped tables were produced in the Prokonnesian quarries as well as at Alikı; these were often made of more finely grained, warmer-colored marble from other quarries, even *breccia*.⁴

The *pavonazetto* quarries of Dokimeion had witnessed a very strong expansion until the middle of the third century, when, ca. 235–236, the marking of blocks by imperial agents was abruptly suspended.⁵ There also existed in these quarries a variety of white marble. These two kinds were greatly prized during the proto-Byzantine period, despite the difficulties of transportation that the distance of the quarries from the sea entailed. At Dokimeion, a specific group of quarries was worked during this period; numerous blocks, but few semifinished or finished pieces, remain in the quarry rubble. L. Robert and subsequently J. Röder have noted the crosses (and human figures) that adorn a number of quarry faces, specifically associated with the remains of the installation of a pendular saw. Quite recently, T. Drew-Bear discovered, etched on a quarry wall, the unabbreviated name of Justinian.⁶ To this evidence, we may add an abundant level of production throughout Phrygia, the quality of which is entirely comparable to the Prokonnesian product.⁷

A great number of other varieties of marble existed in Asia Minor,⁸ prized by both

⁴ M. Bonfioli, "Una mensa a sigma polilobata a Roma," *RendPontAcc* 50 (1977/78): 1–14.

⁵ C. Fant, *Cavum antrum Phrygiae: The Organization and Operations of the Roman Imperial Marble Quarries in Phrygia* (Oxford, 1989), together with M. Christol and T. Drew-Bear, "Les carrières de Dokimion à l'époque sévérienne," *Epigraphica* 53 (1991): 113–74.

⁶ L. Robert, "Les Kordakia de Nicée, le combustible de Nicée et les poissons-scie: Sur des lettres d'un métropolitain de Phrygie au Xe siècle. Philologie et réalités, II," *JSav* (1962): 3–74; J. Röder, "Marmor Phrygium: Die antiken Marmorbrüche von Ischhisar in Westanatolien," *JDAI* 86 (1971): 253–312. The inscription found by T. Drew-Bear remains unpublished.

⁷ An outline and a bibliography of Phrygian sculpture are provided in K. Belke and N. Mersich, *Tabula Imperii Byzantini*, vol. 7, *Phrygien und Pisidien* (Vienna, 1990).

⁸ D. Monna and P. Pensabene, *Marmi dell'Asia Minore* (Rome, 1977), and M. Waelkens, P. De Paepe, and L. Moens, "Survey in the White Quarries of Anatolia," *IV Araştırma Sonuçları Toplantısı* (Ankara,

the Romans and the Byzantines: that of the Troad (a violet granite out of which the columns of the Troad portico in the twelfth region of Constantinople were carved); Sangarios, Laodikeia in Lykos, Aphrodisias, where a cross inscribed in a circle was discovered on a quarry face,⁹ adding evidence to the abundant early Byzantine marbles found on the site; Priene; Ephesos, Teos ("African" marble), Iasos ("Carian" marble or *cipollino rosso*, used in particular at the church of the Holy Apostles); Mylasa, Herakleia ad Latmum, Sardis, and Galatia.

In the Aegean islands, Thasos (the quarries of Vathy and Aliki), Paros, Naxos, Skyros, and Chios (*portasanta*), provided highly prized marble, to which we must add the well-known quarries of Karystos (*cipollino*) and those of a *fior di pesco breccia* near Chalcis in the peninsula of Euboiea. At Karystos, a cross was marked on a quarry wall. Texts, moreover, mention the presence of this marble at Hagia Sophia in Constantinople and also in the cathedral church of St. Stephen of Gaza. The quarries of Aliki and of its immediate surroundings have provided an abundance of Christian marks: fifty-four crosses, human figures, animals, and financial accounts traced in minium that remain undeciphered to this day. This marble supplied not only Thessalonike as early as the Arch of Galerius (299–303), or Delphi in the sixth century (the basilica in the Gymnasium); beginning in the fourth century, it was also exported to Ostia,¹⁰ Rome, and Ephesos; from the sixth century forward, it was exported to Antioch, Cyrenaica, and Pelusium. The white marble of Thrace and of Philippi had a more localized market. The *breccia* of Larissa (called *verde antico*), the white marbles of Hymettos and of Pentelikon, the "serpentine" of Croceia near Sparta, and the red marble from Cape Taenaros, the *cipollino* of Karystos, and the green *breccia* of Thessaly were widely used.¹¹

1986): 113–23; cf. also for the quarries of Miletos and Herakleia ad Latmum; L. Robert, "Documents d'Asie Mineure, XIV: Monnaies et territoire d'Héraclée du Latmos," *BCH* 102 (1978): 502–18, and A. Peschlow-Bindokat, "Die Steinbrüche von Milet und Herakleia am Latmos," *JDAI* 96 (1981): 157–235: figures 19 and 20 may represent a 6th-century basket capital. It is possible that the quarry at Teos was no longer exploited after the Roman era: N. Türk et al., "The Geology, Quarrying Technology and Use of Beylerköy in Western Turkey," in *Classical Marble: Geochemistry, Technology, Trade*, ed. N. Herz and M. Waelkens (Dordrecht, 1988), 85–89. On Turkish white marble, cf. the maps and bibliography in Y. Lintz, D. Decrouez, and J. Chamay, *Les marbres blancs dans l'Antiquité* (Geneva, 1991), 9–13. Regarding the Troad granites, two excellent pages and a very useful map concerning the dispersion of columns made of this stone, the quarrying of which reached its height toward the 4th and 5th centuries, have been published by L. Lazzarini, "Des pierres pour l'éternité: Les granits utilisés dans l'antiquité classique," *Les dossiers de l'archéologie* 173 (1992): 66–67.

⁹ Monna and Pensabene, *Marmi dell'Asia Minore*, 90, fig. 17; 94, fig. 30.

¹⁰ On imports of Thasos marble, but also Prokonnesian and other marble to Ostia and Porto, cf. P. Pensabene, *Le vie del marmo* (Rome, 1994), esp. 33–35.

¹¹ On Grecian white marble, cf. the bibliography and maps in Lintz, Decrouez, Chamay, *Les marbres blancs*, 9–13. On Aliki, see J.-P. Sodini, A. Lambraki, and T. Kozelj, *Aliki, I: Les carrières de marbre à l'époque paléochrétienne* (Paris, 1980), 79–137; on green marble, A. Lambraki, "Les Roches Vertes: Etude sur les marbres de la Grèce exploités aux époques romaine et paléochrétienne" (thèse de 3e cycle, Université de Paris I, 1978), 168–74; concerning saw working during the proto-Byzantine period, and on Karystos in particular, see eadem, "Le cipolin de la Karystie," *RA* (1980): 31–62. See also A. Sampson, "Επισήμανση αρχαιολογικών θέσεων στην Εύβοια," *Ανθρωπολογικά καί Αρχαιολογικά Χρονικά* (Ευβοϊκή Αρχαιόφιλος Εταιρεία) 3 (1988/89): 163–81. On the quarries of Cape Taenaros and Taygetos, cf. F. A. Cooper, "The Quarries of Mount Taygetos in the Peloponnesos, Greece," in *Classical Marble*, ed. Herz and Waelkens (as above, note 8), 65–76.



Sources of marble in the Roman world

(Map legend, with modifications, after E. Dolci, *Il marmo nella civiltà romana: La produzione e il commercio* [Carrara, 1989], inset map)

- | | |
|---|--|
| 1. Attic marble (Pentelikon, Mount Hymettos) | 27. Hierapolis marble |
| 2. Corinth marble | 28. Laodikeia in Lykos marble |
| 3. Lakedaimon marble (from Croceai, serpentine) | 29. Aphrodisias marble |
| 4. Saraki (or Olympia) stone | 30. Alabanda marble |
| 5. Cape Taenaros marble (rosso antico) | 31. Mylasa marble |
| 6. Tegea or Doliana marble | 32. Iasos marble (cipollino rosso) |
| 7. Calydon marble | 33. Herakleia ad Latnum marble |
| 8. Thessaly breccia (verde antico) | 34. Priene marble |
| 9. Karystos marble (cipollino) | 35. Ephesos marble |
| 10. Skyros marble | 36. Teos marble (africano, luculeo) |
| 11. Thasos marble | 37. Rhodes marble |
| 12. Lesbos marble | 38. Beni Suef alabaster |
| 13. Chios marble (portasanta) | 39. Hatnub alabaster |
| 14. Paros marble (including lychnites) | 40. Green porphyry, red porphyry from Mons Porphyreticus |
| 15. Naxos marble | 41. Granodiorite from Mons Claudianus (granito del foro) |
| 16. Tinos marble | 42. Ophyte (diorite from Mons Aphites) |
| 17. Andros marble | 43. Basanite |
| 18. Chalcis marble (fior di pesco) | 44. Syene granite |
| 19. Philippi marble | 45. Chemtou (giallo antico) |
| 20. Prokonnesos marble | 46. St. Beat white marble |
| 21. Troad marble (granites) | 47. Aquitaine marble (bianco e nero antico) |
| 22. Alabaster | 48. Verona marble |
| 23. Sangarios marble | 49. Luna (Carrara) marble |
| 24. Dokimeion marble | |
| 25. Synnada marble (pavonazetto) | |
| 26. Sardis marble | |

In Africa at Chemtou, where the Roman system of marking blocks ceased in 201, the arrival of the Vandals would have accentuated a decided slowdown in the quarries as of the year 280. A coin hoard of 1,647 pieces dating to the end of the reign of Honorius (395–423) constitutes the latest evidence found on the site. A single Christian inscription has been identified, dating possibly from the fourth century, in a quarry that used a pendular saw.¹² In Egypt a large number of granites (those from the Mons Claudianus being the most widely known), porphyries (from Mons Porphyreticus), and, in the Wadi Hamamath, basanite and *breccia* called *hekatontalithos* by Constantine of Rhodes, in his description of the church of the Holy Apostles in Constantinople, were no longer available at some point before the end of the sixth century.¹³ At Mons Porphyreticus, the latest pottery, very sparsely represented, dates to the end of the fifth century. These marbles nonetheless continued to be in demand, in particular the porphyry or “Roman marble”¹⁴ that adorned the *Porphyra*, the room of the palace in which dynastically legitimate emperors were born,¹⁵ and certain areas of the throne room.¹⁶

The black-and-white marble of the Pyrennees was the sole west European marble known in Constantinople. It is found at Saraçhane and is mentioned by Paul Silentiarios in connection with Hagia Sophia and by Constantine of Rhodes in connection with the church of the Holy Apostles.¹⁷

The “marble style” (to apply to 5th- and 6th-century marble production the felicitous expression of J. B. Ward-Perkins regarding the homogeneous decorative style that the development of trade in marble facilitated in the 2d century¹⁸) spread far beyond Constantinople and brought into play quarries other than those of Prokonnesos. The Byzantine taste for polychrome marbles is notable. Independent of their use for wall revetment, colored marbles like the Phrygian *pavonazetto* also supplied the material for columns, notably at the church of Sts. Sergios and Bakchos, and, according to Constantine of Rhodes, at the church of the Holy Apostles. So too with respect to *breccia* from Thessaly (St. John the Studite, Hagia Sophia, Sts. Sergios and Bakchos), which

¹² F. Rakob, *Simitthus*, vol. 1 (Mainz, 1993).

¹³ E. Legrand, “Description des oeuvres d’art et de l’église des Saints-Apôtres de Constantinople,” *REG* 9 (1896): 57, line 692; regarding this marble, see Gnoli, *Marmora romana*, 88–97; D. Peacock and V. Maxfield, *The Roman Imperial Quarries: Gebel Dokhan, Egypt* (London, 1994).

¹⁴ This alternative term for porphyry may originate in the stone’s symbolic value as the quintessence of Roman power. J. Deer, *The Dynastic Porphyry Tombs of the Norman Period in Sicily* (Cambridge, 1959), 117–69, believes that the reason is rather that Rome was the principal source of this stone, “the principal repository of porphyry ever since the early Middle Ages” (117).

¹⁵ *Anne Comnène, Alexiade*, ed. B. Leib, 3 vols. (Paris, 1937–45), 2:90 (chap. 7, § 4).

¹⁶ *Le livre des cérémonies*, ed. A. Vogt, 2 vols. (Paris, 1967), 1:152 (39.11–14).

¹⁷ Saraçhane: R. M. Harrison, *A Temple for Byzantium* (London, 1989), 77–78, figs. 80–81; Hagia Sophia: Mango, *Art*, 86 (Celtic: Gnoli, *Marmora romana*, 35, 39, 168–70); Holy Apostles: Legrand, “Saints-Apôtres,” line 600.

¹⁸ A. Boëthius and J. B. Ward-Perkins, *Etruscan and Roman Architecture* (Harmondsworth, 1970), 494, cited by C. Fant, without specific reference, in “The Roman Emperors in the Marble Business: Capitalists, Middlemen or Philanthropists,” in *Classical Marble*, ed. Herz and Waelkens (as above, note 8), 152.

also provided the material for chancel enclosures (Basilica B of Philippi, St. John of Ephesos, the cruciform basilica at Thasos), and for ambos (Hagia Sophia of Thessalonike, the Marzamemi cargo). Other white-marble quarries produced, for their own part, imitative pieces, some of which are indistinguishable from the Prokonnesian panels. These various types of marble were assembled within single structures, either through combined orders or through a single order placed with large entrepôts that gathered different varieties of marble. The Marzamemi cargo, whose ultimate terminus remains unknown, is a good example of these composite exports: the bases, shafts, and capitals are made of Prokonnesian marble, the ambo is *breccia* from Thessaly, and the altar table is of a finer marble (Mount Pentelikon, Asia Minor?). Was it loaded in a single location? Did the cargo ship stop at three different yards? The first seems the most plausible answer.¹⁹ In many other cases, we find job lots, including in the church of Poreč, whose builder, the archbishop Euphrasios, is often described (erroneously) as having acquired his marble from Constantinople. It seems more plausible that he purchased the marble in a Ravennate entrepôt where the available supply did not permit a homogeneity as pronounced as that of the church of the Acheiropoietos in Thessalonike, Sant'Apollinare in Classe, or San Vitale, where the column elements (bases, shafts, and capitals), ordered specifically from Constantinople, were uniform within each site.²⁰

No coherent, state-controlled system of quarrying can be reconstructed from the legislative texts that have come down to us, even if these texts reaffirm in several instances the state's annexation of specific named quarries. To be sure, there were quarries that in the third century formed part of the imperial domain and remained so in cases where its political sovereignty so permitted. Undoubtedly, Diocletian's Price Edict (*edictum de pretiis*) lists a certain number of quarries that belonged to the state; it remains uncertain, however, whether *all* of them did so, and whether all that the state did control are listed therein. Related to the issue of state control, the quarries would have had a workforce of slaves and convicts (*damnati ad metalla*), as did the mines. To be sure, the *Passio Quattuor Coronatorum*,²¹ a hagiographic text that must be treated with a certain degree of caution, mentions even as late as the period of Diocletian a Christian bishop condemned *ad metalla* in the porphyry quarries of Fruska-Gora, while the fate of the future martyrs and that of their *artifices* companions is passed over in silence (there is no mention of their possible status as slaves). The *Acta Sancti Clementis* mention several *damnati ad metalla* in the quarries of Inkermann.²² It is plausible, however, that the workforce evolved concomitantly with the organization of quarries, the exploitation of which was increasingly delegated to private enterprise.²³

¹⁹ G. Kapitän, "Elementi architettonici per una basilica dal relitto navale del VI secolo di Marzamemi (Siracusa)," *CorsiRav* 27 (1980): 71–136.

²⁰ Cf. A. Terry, "The Sculpture at the Cathedral of Eufhrasius in Poreč," *DOP* 42 (1988): 13–64; E. Russo, *Sculture del complesso eufrasiano di Parenzo* (Naples, 1991).

²¹ *AASS*, Nov. 3:765–79 (auctore Porphyrio).

²² Example cited by Fant, "The Roman Emperors in the Marble Business," 153.

²³ Traces of a military presence surrounding marble quarries after the 3d century do not appear to be common. I am skeptical of the military function attributed to the structures in the region of

The marks of stonemasons, which appear sporadically toward the end of the fourth century and proliferate in the course of the sixth, shed little light on this system. Most are engraved on bases, shafts, capitals, panels, and chancel piers, most often in Prokonnesian marble. The marks, which seem not to have been inscribed on all pieces (unless one assumes that they would have been painted, but not incised, on most of the worked pieces and that they thus would easily have disappeared), cannot be interpreted as indicative of a hallmark, in the way that seals were imprinted on silver during the same period by imperial officers. Most often, it is a matter of a few letters—rarely more than three—sometimes grouped into a monogram (there are, however, no cruciform monograms), which might be interpreted as the abbreviated name of the artisan (working alone or as part of a team). The presence of invocations would tend to confirm this interpretation.²⁴

This mass production, with marked aspects of line work, a product of both imperial and private quarries, was certainly not entirely at the disposition of the emperors. To be sure, the great imperial projects (the construction of the *fora*, as well as Justinian's building of Hagia Sophia) were managed directly by the emperor. The same would have been true for the emperor's gift-giving, such as the thirty-two columns from Karystos that Empress Eudoxia sent for the construction of the cathedral at Gaza, or the Ionic capitals with the monograms of Justinian and Theodora, shipped together with their bases and shafts to St. John of Ephesos. In addition to imperial largesse, however, there was a market: St. John Chrysostom recounts the story of the monk from Thasos who was sent to Constantinople to purchase slabs of Prokonnesian marble and squandered the funds.²⁵ At the beginning of the seventh century, the *Miracula Demetrii* show the bishop of Thenai in Byzacena buying an ambo and a ciborium from a ship's captain.²⁶ It is therefore a plausible assumption that marble was obtainable on the open market. One can postulate with some certainty that there would have been marketplaces, modeled on the Marmorata in Rome. (No text, however, mentions the existence

Alikı by T. Koželj and M. Wurch-Koželj, "The Military Protection of the Quarries of the Alikı Area during the Byzantine Period," in *Ancient Stones: Quarrying, Trade and Provenance*, ed. M. Waelkens, N. Herz, and L. Moens (Leuven, 1992), 43–57. There is nothing military about these installations, and the interpretation is quite labored; rather, they appear to be scattered dwellings, occupied by the quarry workers themselves or by agricultural workers. The importance of slavery is far from being proven, at least as regards agricultural production: R. MacMullen, "Late Roman Slavery," *Historia* 36 (1987): 359–82. We have no recent studies regarding quarries.

²⁴ F. W. Deichmann, *Ravenna, Hauptstadt des spätantiken Abendlands*, vol. 2, *Kommentar*, pt. 2 (Wiesbaden, 1976), 206–30; J.-P. Sodini, "Marques de tâcheron inédites à Istanbul et en Grèce," in *Artistes, artisans et production artistique au Moyen Âge*, ed. X. Barral y Altet, (Paris, 1987), 2:503–10; C. Barsanti, A. Guiglia Guidobaldi, and J.-P. Sodini, "La sculpture architecturale en marbre au VI^e s. à Constantinople et dans les régions sous influence constantinopolitaine," *Acta XIII Congressus internationalis archaeologiae christianae, Split-Poreč, 1994*, ed. N. Cambi and E. Marin (Split, 1998), 301–76. At Alikı, A. Conze has noted a panel inscription, which I would interpret as the offering, by a team of Thasian quarrymen, of the panel to a church: J.-P. Sodini and K. Kolokotsas (with the assistance of L. Buchet), *Alikı, II: La basilique double* (Paris, 1984), 10, fig. 10a.

²⁵ Gregory of Nazianzos, *Poema de se ipso*, lines 875ff., PG 37:1089.

²⁶ P. Lemerle, *Les plus anciens recueils de miracles de saint Démétrius et la pénétration des Slaves dans les Balkans*, 2 vols. (Paris, 1979), 1: no. 6, chap. 313, p. 239 (trans., p. 235), and 2: pp. 166–69.

of this in Constantinople.) One would assume that the same would also have held true at Ravenna, Carthage, Antioch, Caesarea in Palestine, and Alexandria.

Besides the large resources of Aegean marble and those of less well known quarries, which permitted a church in Negev to obtain a few panels, piers for a screen, an altar, and a marble reliquary, there was the more localized market for marble substitutes. Finally, as a last resort, there were always fieldstone quarries that provided foundation and wall material. In Constantinople, the fieldstone was a type of soft limestone, and the building of the city's walls required its extensive exploitation. The stone was not suitable for load-bearing architectural sculpture, since it would not have withstood compression. On the other hand, at the end of the fourth century and at the beginning of the fifth, the quarry furnished stone for sarcophagus fronts carved in low relief in a somewhat labored style, but clearly directed to a quite affluent clientele. There were other limestone quarries close by Constantinople, such as that of Catalça in Thrace.²⁷ In other regions, there may have existed polishable stone that would have been used as a substitute for *breccia* (the rose-colored limestone of northern Syria), or for white marbles (bituminous schist from Nebi Musa in central Jordan, widely used in the 7th century, perhaps by virtue of the scarcity of Aegean marble), and which as a result were traded within specific regions, somewhat like marbles of lower quality. In addition, there was local stone carved on site, which sometimes favored the development of large regional schools of sculpture in Lycia, Egypt, northern Syria, and, to a lesser degree, Cilicia. In Jordan, near Qasr al-Hallabat—an extremely rare instance—several inscriptions dating from between the fifth and seventh centuries mention three individuals—Theodore, Sergios, and Zenon—commissioned to quarry blocks for a church dedicated to St. John, situated in a nearby town, either Bosra or Philadelphia. The most prominent—the deacon Theodore—seems to have been responsible for construction at the church and to have occupied the function of quaestor for the town.²⁸

As we can see, the early Byzantine period heralded the return to a sophisticated, hierarchical system of stoneworking, the heritage of Rome, the impetus for which came from Constantinople. Far from a crushing monopoly, the marble industry of Prokonnesos engaged other Aegean quarries—even the lowliest—in the production of material for churches. The “marble style” was, moreover, diversified, and the development of outlying regions favored the persistence of local styles, which found expression in materials other than marble.

With the seventh century, the Aegean witnessed a crisis of great magnitude that considerably slowed the imperial and ecclesiastical building programs. It is even possible that the impediments to maritime traffic imposed by the Slavs, Avars, and Persians had suspended regular contacts between the island of Prokonnesos and Constantinople, depriving the capital of its main source of marble and causing an at least tempo-

²⁷ F. Dirimtekin, “An Antique Altar at the Vicinity of Subasi Village, 10 Km North of Catalça,” *Ayasofya Müzesi Yıllığı* 8 (1969): 53–56; 84, fig. 1; 85, figs. 4–5; 86, figs. 6–7. This is, in fact, the face of a quarry, not a sanctuary.

²⁸ P.-L. Gatier, “Inscriptions grecques des carrières de Hallabat,” *Studies in the History and Archaeology of Jordan* 5 (Amman, 1995): 399–402.

rary cessation of quarry work, which surveys of the island should be able to corroborate. The quarries of Aliki ceased functioning permanently around 615–620; whether the cessation of activity in this part of the island was the result of an attack by the Slavs or an earthquake, it was not followed by any recovery. The Phrygian quarries also fell into decline, if one takes the production of marble pieces as evidence, before their undoubted recovery (albeit on a reduced scale) in the tenth and eleventh centuries.

Some rare, early evidence demonstrates an interesting evolution. The Baths of Yalova under Justin II provided impeccably crafted basket capitals.²⁹ The same holds true of a capital with the monogram of Phokas in the museum of Afyon.³⁰ Both evidence an evolution toward an elegant simplicity: the surfaces are outlined by a simple beaded molding and a central motif in the form of a monogram. A capital dating from somewhat later—the reign of Herakleios—is a reuse: a mask has been transformed into a cartouche to accommodate an inscription honoring the emperor.³¹ Chancel screens disclose the same simplification and flattening of the relief: in the first instance toward the end of the seventh century or beginning of the eighth at the church of the Dormition in Nicaea on panels inscribed with crosses, and on one with the monogram of its founder Hyakinthos (a monogram also inscribed on the recently discovered lintel);³² so, too, subsequently at the church of St. Irene, on panels monogrammed with the insignia of Constantine V, corresponding to its reconstruction by the emperor.³³ If A. Berger's hypothesis concerning St. Euphemia holds true,³⁴ the transfer of her relics ca. 680 from Chalcedon to the palace of Antiochos was accompanied by a complete reutilization of the architectural sculpture of the sanctuary's enclosure and of the solea of a sixth-century church. This provides marked evidence of the absence of newly quarried marble: for the first time in Constantinople, the arrival of eminent relics was not accompanied by a new installation, but rather by resort to reused materials.

At the same time, there was continuity in how marbles were used by the emperors. The clearest evidence is undoubtedly the niggling precision with which the stone of the imperial tombs is described until the tenth century. According to tradition, the emperor chose the stone of his sarcophagus on the day of his coronation.³⁵ One thus

²⁹ J. Kramer, "Kämpferkapitelle mit den Monogrammen Kaiser Justinus II. und seiner Gemahlin, der Kaiserin Sophia in Yalova Kaplıcaları (Termal)," in *Festschrift für Klaus Wessel zum 70. Geburtstag*, ed. M. Restle (Munich, 1988), 175–90.

³⁰ Barsanti, Guiglia Guidobaldi, and Sodini, "La sculpture architecturale en marbre au VIe s."

³¹ N. Firatlı, *La sculpture byzantine figurée au musée archéologique d'Istanbul* (Paris, 1990), no. 226.

³² U. Peschlow, "Neue Beobachtungen zur Koimesiskirche in Iznik," *IstMitt* 22 (1972): 145–87, esp. 166–82, pls. 43–44; C. Mango, "Notes d'épigraphie et d'archéologie: Constantinople, Nicée," *TM* 12 (1994): 353: "marbres qui n'ont pas l'air d'avoir été réutilisés."

³³ T. Ulbert, "Untersuchungen zu den byzantinischen Reliefplatten des 6. bis 8. Jahrhunderts," *IstMitt* 19/20 (1969–70): 339–57, esp. 345–46, pl. 72, 1–3.

³⁴ A. Berger, "Die Reliquien der Heiligen Euphemia und ihre erste Translation nach Konstantinopel," *Hellenika* 39 (1988): 311–22.

³⁵ Leontios of Neapolis, *Vie de Jean de Chypre*, ed. A. J. Festugière, with L. Rydén (Paris, 1974), chap. 17 (text, p. 365; trans., p. 467), cited by Gnoli, *Marmora romana*, 66–67, and P. Karlin-Hayter, "L'adieu à l'empereur," in A. Dierkens and J.-M. Sansterre, "Le souverain à Byzance et en Occident du VIIe au Xe s.," *Byzantion* 61 (1991): 123.

finds in the list of the imperial sarcophagi at the church of the Holy Apostles all the marble used in these instances. Indeed, the use of porphyry by the early emperors ceases with Marcian (450–457); his successor, Leo I, is still entitled to green Egyptian porphyry, and Anastasios used marble from Aquitaine at the time when it appears to have been highly sought after for churches (St. Polyeuktos, Hagia Sophia, and the church of the Holy Apostles, and reused at the Topkapi palace). Other sarcophagi, up to those of Constantine VIII and his brother Basil, are in Greek marble (eleven of them in marble from Thessaly), in marble from the islands (nine in Prokonnesian marble) or from Asia Minor (seven in assorted marbles from Sangarios, two in Hierapolitan marble, two in Dokimeionian marble, one in Bithynian [?] marble, two others in *breccia* that probably originated in Asia Minor). Among the others, scattered over diverse points of the city, one notes the presence of marble from Thessaly, from Prokonnesos (or Pikrimaios), from Sangarios,³⁶ and from Bithynia. Michael Psellos complains of the sums lavished by emperors prior to Isaac I Komnenos (1057–59) on sarcophagi in “Phrygian,” Italian (“Roman” or porphyry?), or Prokonnesian marble, for the establishment of monasteries around their tombs and on endowments for monks ordered to pray for the salvation of the deceased.³⁷

Marble continued to play a large role, decorative and often symbolic, in the Great Palace. Recounting the building programs of Theophilos in the Great Palace, the Continuator of Theophanes mentions, in addition to porticoes in Carian marble (a stone used, like that of the Troad, in porticoes: compare the Blachernae marble porticoes, which date to the reign of Maurice),³⁸ porphyry, marble from Dokimeion, Rhodes, Prokonnesos, Thessaly, Cape Vathy (possibly in the island of Thasos), or from Cape Taenaros.³⁹ In the Nea Ekklesia of Basil I, the two *phialai* of the atrium were made of porphyry and Sangarian marble. For the construction of the Kainourgion, Basil used eight Thessalian marble columns and eight onychite columns, whose provenance may be the quarries of Dokimeion. Of the latter, six were adorned with an inhabited scroll—which brings to mind the decoration of the fragments in the Archaeological Museum at Istanbul⁴⁰ and which thus might, like those fragments, date from the proto-Byzantine period—and two with spiral fluting, again a motif widely used in the sixth century, notably for the columns of ciboria. The pavement was made of an assemblage of marbles, dominated by Carian and Thessalian marble; at the center a peacock in display was represented. An act ceding the so-called Palace of Botaneiates to the Genoese in 1202 mentions Bithynian marble and a green marble, undoubtedly Thessalian *breccia*.

Nonetheless, a number of legendary texts testify to a disjunction between the knowledge of marbles and the knowledge of their quarrying. As early as the *Patria* (8th–9th century?), “we live in an age where we no longer hew marble from the quarry; it is all

³⁶ Gnoli, *Marmora romana*, 178.

³⁷ Michel Psellos, *Chronographie*, ed. E. Renauld, 2 vols. (Paris, 1926–28), 2:119 (VII.59).

³⁸ Mango, *Art*, 160–65.

³⁹ Cooper, “The Quarries of Mount Taygetos.”

⁴⁰ Firatlı, *La sculpture byzantine*, nos. 190 and 191.

reused architectural elements from antiquity, from nearby (the islands, Bithynia), fated to be pulled down.”⁴¹ The ninth-century account of the construction of Hagia Sophia in Constantinople cites the high esteem accorded colored stone (in particular porphyry and Thessalian *breccia*), but they are no longer deemed to have been quarried expressly for Hagia Sophia; such, in fact, may indeed have been the case for the porphyry columns, which are shorter than the other columns. These stones have become spoils and trophies, raised to celebrate the death of the pagan gods. An anonymous account dating from 1491 identifies the marbles of Hagia Sophia as spolia from the palace built by Solomon the Prophet at Kyzikos-Aydincik. Porphyry and Thessalian *breccia* have become talismans.⁴²

One is tempted to agree with Cyril Mango’s contention that, like Rome, Constantinople abounded in marble and that this superabundance of material favored the reuse of pieces, which could have been acquired on the market, and that there was thus no longer a need to quarry fresh marble, a protracted process that necessitated its transportation. To be sure, Constantinople exported marble to Preslav and Kiev, but the quantities are in no way comparable to those shipped by sea before the seventh century. Psellos is undoubtedly indulging in rhetorical exaggeration when he writes that under Romanos III Argyros (1028–34), who was constructing the monastery of the Peribleptos in an attempt to rival Justinian, “every mountain was excavated, and the art of the quarrier prized more highly than that of philosophy itself.”⁴³ We see emperors at best reutilizing available materials. Theophilos transferred to Lausiakos capitals taken from the Palace of Basiliskos.⁴⁴ Having had the sarcophagus of Constantine V removed from the mausoleum of Justinian near the church of the Holy Apostles, Michael III cut it apart to make chancel panels for the church of the Virgin of Pharos. Basil I used marble from Justinian’s mausoleum at the church of the Holy Apostles, both for the Nea Ekklesia and for the church of the Virgin in the Forum. John Tzimiskes ransacked the Baths of the Oikonomion, identified with the Palace of Marina, the daughter of Emperor Arkadios,⁴⁵ and still in use under Nikephoros II Phokas, to build the church of Christ of Chalke, where he had himself interred. Basil and Leo VI reused, so to speak, the entire monument in restoring it, including its statues of divinities and mythological figures dating back to the original construction of the building, that is, to the first half of the fifth century. Isaac II Angelos (1185–1204) ransacked the Palace of Mangana to decorate the church of the Archangel Michael at Anaplous.⁴⁶

⁴¹ G. Dagron, *Constantinople imaginaire* (Paris, 1984), 267 (with citations to the specific passages).

⁴² S. Yerasimos, *La fondation de Constantinople et de Sainte-Sophie dans les traditions turques* (Paris, 1990), esp. 136–37.

⁴³ Psellos, *Chronographie*, 1:41 (III.14).

⁴⁴ R. Janin, *Constantinople byzantine* (Paris, 1964), 115 n. 5.

⁴⁵ C. Mango, “The Palace of Marina, the Poet Palladas and the Bath of Leo VI,” in ΕΥΦΡΟΣΥΝΟΝ: Ἀφιέρωμα στὸν Μανόλη Χατζηδάκη (Athens, 1991), 321–30.

⁴⁶ The main essay on the subject is that of W. Müller-Wiener, “Spoliennutzung in Istanbul,” in *Beiträge zur Altertumskunde Kleinasiens: Festschrift für Kurt Bittel*, ed. R. M. Boehmer and H. Hauptmann

The abundance of reused materials in the churches of Constantinople confirms the information provided by the written sources.⁴⁷ The church erected by Constantine Lips in 907–908 reuses a number of early Byzantine capitals and the fragment of a panel from the church of St. Polyeuktos. Its pavement reutilizes funerary stelae from Kyzikos, the town located across from Prokonnesos; these were quite logically favored since they had already been shaped and could be used in place of freshly quarried marble from the island.⁴⁸ The monastery of the Pantokrator also possesses a panel originating from St. Polyeuktos. The church of St. Theodore contains several capitals dating from the early Byzantine period, reused without alteration, as do Kalenderhane and St. Andrew in Krisei. The latter goes so far as to incorporate in full into its construction the jambs of an early Byzantine door of a highly distinctive style. The church of the Holy Savior in Chora includes early and middle Byzantine capitals (11th century), reused in the fourteenth century, and blind doors of marble dating from the early period. The door-jambs in these churches, whose moldings resemble those of sixth-century churches, are very often likely to be salvage pieces from precisely this time. Wall revetments and paving stones are created from older pieces, notably the *rotae* of porphyry or Thessalian marble that form the center of the *opera sectilia* of the Constantinopolitan and provincial churches.

The Istanbul Archaeological Museum offers several examples of reuses, notably of sarcophagi whose decoration has been reworked to bring it into line with contemporary taste, parapet panels, and tomb slabs.⁴⁹ At the Louvre there is a fragment of the second century with a Constantinopolitan provenance that was transformed into a stele with a representation of a military saint.⁵⁰ Cyril Mango has shown that the facade of the Boukoleon that gives on the sea was decorated with important spolia.⁵¹ In the fourteenth century, the alteration of the land approach to the Golden Gate, where antique and early Christian marbles are set into the wall in two rows, shows the aesthetic value that the Palaiologan emperors drew from spolia.⁵² At this stage, the repre-

(Mainz, 1983), 369–82. Note also the valuable commentary of C. Mango, “Storia dell’Arte, seminario,” in *La civiltà bizantina dal IX al XI secolo*, ed. A. Guillou, Corsi di Studi, Università di Bari II (1977) (Bari, 1980), 259–62, 268–69; idem, “L’attitude byzantine à l’égard des antiquités gréco-romaines,” *Byzance et les images* (Paris, 1994), 95–120, and idem, “Ancient Spolia in the Great Palace of Constantinople,” in *Byzantine East, Latin West: Art-Historical Studies in Honor of Kurt Weitzmann*, ed. C. Moss and K. Kiefer (Princeton, N.J., 1995), 645–49.

⁴⁷ Cf. note 46. See also T. F. Mathews, *The Byzantine Churches of Istanbul* (University Park, Pa., 1976), in which a good number of these spolia are illustrated.

⁴⁸ C. Mango and E. J. W. Hawkins, “Additional Notes,” *DOP* 18 (1964): 311–15, and “Additional Finds at Fenari Isa Camii, Istanbul,” *DOP* 22 (1968): 182; L. Robert, “Documents d’Asie Mineure,” *BCH* 102 (1978): 452–60, commentary on the transportation of stone from Kyzikos to Constantinople during the Byzantine and Ottoman periods.

⁴⁹ Firatlı, *La sculpture byzantine*, s.v. “remploi.”

⁵⁰ Mango, “L’attitude byzantine,” 114, fig. 16.

⁵¹ Mango, “L’attitude byzantine”; idem, “Ancient Spolia.”

⁵² Mango, “L’attitude byzantine,” and S. Guberti Bassett, “John V Palaiologos and the Golden Gate in Constantinople,” in *TO ΕΛΛΗΝΙΚΟΝ: Studies in Honor of Speros Vryonis Jr.*, vol. 1, *Hellenic Antiquity and Byzantium*, ed. J. S. Langdon et al. (New Rochelle, N.Y., 1993), 117–73.

sentations (whose original import had long been forgotten) conferred on these marbles a protective magic, to which a prophetic value would have been ascribed, as well as, undoubtedly, a nostalgia (for which we have abundant evidence in funerary art) for the antique style. Somewhat later (at the beginning of the 15th century), near the Golden Gate, the Mermerkule was built, the lower portion of which is made of a reused facing.⁵³

It is possible that even in Constantinople materials other than marble would have been reused. Brick undoubtedly remained in constant production, and the high precision of its use during the Komnenian dynasty (a period of expansive construction)—in walls of recessed brickwork and in the drums of domes with pilasters—would have precluded the utilization of salvaged materials in important areas (the apses, northern and southern arches, the drums of the domes). In contrast, the city's ramparts, by virtue of the inexactitude of the joints in certain reworked areas, suggest that limestone blocks and even bricks were reused. Doing so would no doubt have preserved the consistency of the construction technique of these walls. But does this explain the reuse of blocks? Were the limestone quarries of Constantinople, about which we know nothing, still functioning after the seventh century?

Outside Constantinople, the situation was surely otherwise, depending on the value attached to the material available for reuse and the scale of buildings to be constructed. The reuse of marble, and more generally of stone that could take a high polish, was significant. In particular, the reuse of proto-Byzantine capitals was common currency in the large urban centers of late antiquity (Athens, Thessalonike), but also in the churches of cities that had developed much later, such as Arta, or in villages such as Merkaba, where materials were deliberately brought from some distance, rather than being fashioned anew. The reuses that provide the most telling evidence of the scarcity of marble are those distinguished by the reworking of an already ornamented piece. A few examples will suffice. In the church of the Dormition in Nicaea, the sanctuary panels originally installed were reused in the eleventh century, with designs recarved and sculpted on the front to reflect the reigning taste.⁵⁴ At Trajanopolis, a bust of Christ is carved on the back of an ambo platform⁵⁵ in a manner that recalls the Virgin at Dumbarton Oaks, sculpted on the back of a sixth-century parapet plaque. Similarly, in Gürnüt, in northeastern Pisidia, a columnar sarcophagus served as the platform for an ambo in the tenth/eleventh century.⁵⁶ In medieval Xanthos as well, where occupation was much more limited than it had been during earlier periods, there was no intromission of new materials: the installation of a middle Byzantine iconostasis was executed by reusing the sculptures of the preexisting early Christian basilica. The pan-

⁵³ U. Peschlow, "Mermerkule: Ein späbyzantinischer Palast in Konstantinopel," in *Studien zur byzantinischen Kunstgeschichte: Festschrift für Horst Hallensleben zum 65. Geburtstag*, ed. B. Borkopp, B. Schwelldewald, and L. Theis (Amsterdam, 1995), 93–97.

⁵⁴ Peschlow, "Neue Beobachtungen," 166–82.

⁵⁵ K. E. Tsouris, "Ἀμβωνὰς ἀπὸ τὴν Τραϊανούπολη," *ΑΔ* 32.1 (1977): 234–51.

⁵⁶ M. Özsaıt and J.-P. Sodini, "Sarcophages à colonnes et église byzantine dans la région de Néapolis de Pisidie," *R4*, n. s. (1991): 43–62, figs. 11–12.

els, the knotted columns, the architrave of the templon—clearly reworked from a column—are all reuses.⁵⁷ It is quite possible that the marble cutters dispatched by Leo of Synada also used spolia.⁵⁸ In central Greece, the church of the Dormition at Skripou (873/874) is built of antique stones from Orchomenos.⁵⁹ One would also suppose that reuses are common in the monastery of Hosios Loukas, although with respect to the architectural sculpture, L. Bouras makes that case only for the bases of the templon of the church of the Virgin.⁶⁰ By contrast, reuse is frequent in the pavings and the revetment of the two churches.⁶¹ In Athens we note few reuses among the epistyles, the slabs, or the colonettes of the templon screens. Attic sarcophagi were sometimes converted in the middle Byzantine period and redecorated for use as panels in the templon (in the church of the Blachernai (in Elis), Panagia (of Melos-Kepos), but also the crowning arch of a despotic icon (at Panagia of Korakonesia).⁶² The use of epistyles and of templon pillars as doorjambs and window frames, evidenced in particular in Arta and its environs (St. Demetrios tou Katsouri, St. Merkourios, Blachernai), testifies to some degree to the relative scarcity of marble. It is essential to distinguish among reuses that seek to embellish a facade, those that represent the conversion of an earlier function or a refitting to reflect contemporary tastes (as was done in a panel at the Byzantine Museum in Athens),⁶³ and those that function as a symbolic magic, as in the “Little Metropolis” in Athens.⁶⁴

In fact, the use of spolia is a widespread phenomenon in the medieval Mediterranean, particularly so in Egypt, Tunisia, and Italy. In Islamic regions, we have been able to trace scattered marbles back to their antique sites: the mosques of Cairo, Tunis, Gafsa, and Kairouan must have obtained their stone by such means, although Kairouan houses a large number of spolia, not limited, moreover, to the main mosque.⁶⁵

⁵⁷ J.-P. Sodini, “Une iconostase byzantine à Xanthos,” *Actes du Colloque sur la Lycie antique* (Paris, 1980), 119–48.

⁵⁸ M. P. Vinson, *The Correspondence of Leo, Metropolitan of Synada and Syncellus* (Washington, D.C., 1985), ep. 45, with the excellent commentary of L. Robert, “Kordakia de Nicée,” *JSAV* (1962): 41. In Phrygia they may also have worked in quarries in which we know that the saw was employed during the proto-Byzantine period. Cf. above, 126.

⁵⁹ G. Hadji-Minaglou, “Le grand appareil dans les églises des IXe–XIIe s. de la Grèce du Sud,” *BCH* 118 (1994): 163.

⁶⁰ L. Bouras, “Ο γλυπτὸς διάκοσμος τοῦ ναοῦ τῆς Παναγίας στὸ Μοναστήρι τοῦ Ὁσίου Λουκά (Athens, 1980), 91, fig. 148.

⁶¹ Cf. the preliminary account of A. Lambraki, “Αναγνώριση τῶν μαρμάρων στὰ δάπεδα τοῦ συγκροτήματος Ὁσίου Λουκά Φωκίδος, 1,” in *12ο Συμπόσιο Βυζαντινῆς καὶ Μεταβυζαντινῆς Αρχαιολογίας καὶ Τέχνης* (Athens, 1992), 31–32, and eadem, “Αναγνώριση, 2,” in *13ο Συμπόσιο Βυζαντινῆς καὶ Μεταβυζαντινῆς Αρχαιολογίας καὶ Τέχνης* (Athens, 1993), 25–26.

⁶² G. Koch, “Christliche Wiederverwendung attischer Sarkophage,” *Boreas* 17 (1994): 115–20.

⁶³ M. Sklavou-Mavroeidi, “Συμβολικὴ παράσταση στῆ δεύτερη χρῆση τῆς επαναχρησιμοποιημένης πλάκας T.175 τοῦ Βυζαντινοῦ Μουσείου.” *Δελτ.Χριστ.Ἀρχ.* Et., 4th ser., 17 (1993–94): 37–44 (reuse of a 4th-century B.C. Attic stele, with an 11th-century addition of an inhabited scroll).

⁶⁴ H. P. Maguire, “The Cage of Crosses: Ancient and Medieval Sculptures on the ‘Little Metropolis’ in Athens,” in *ΘΥΜΙΑΜΑ στὴ μνήμη τῆς Λασκαρίνας Μπούρα* (Athens, 1994), 169–72.

⁶⁵ N. Harrazi, *Chapiteaux de la grande mosquée de Kairouan* (Tunis, 1982); C. Ewert and J.-P. Wissak, *Forschungen zur Almohadischen Moschee*, vol. 1, *Vorstufen* (Mainz, 1981); cf. also the very useful note of

Second, while there are some interesting cases in Norman Italy, the most striking example is that of San Marco in Venice, where reuses, introduced into the core of the structure in the eleventh century, proliferated in the thirteenth century, notably on the south and west facades, like so many trophies brought back from Constantinople, along with the horses from the Hippodrome, the tetrarchs, and the two large columns that stand on the *piazza*.⁶⁶

If fastidiously worked, reuses are often indistinguishable from newly quarried marble. Undoubtedly older marbles that could be reused as needed were carefully gathered. In particular, the development of sarcophagi in and after the ninth century, where the use of marble is limited to a single panel on the outer face, could rely on spolia, even if production was abundant, and such reused pieces were prized in the eleventh and twelfth centuries,⁶⁷ to the point that certain sculptors felt the need to sign their work, as did a certain Coetos on Naxos in 1126.⁶⁸ It seems in any event that, by the fourteenth century, newly quarried marble was a rare commodity. When the Gattilusi in Lesbos, strongly inspired by the Byzantine funeral style, reused sarcophagi and earlier panels, they did not do so solely with the intent of being considered Byzantine princes of long standing.⁶⁹ Even in Constantinople at the beginning of the fourteenth century, the front of a sarcophagus found at the church of St. John the Studite that depicts the Lamentation and is carved, for want of marble, in reddish *breccia* from Bilecik, would have been intended (if one is to believe U. Peschlow⁷⁰) for Constantine Palaiologos Porphyrogennetos, brother of Emperor Andronikos II, who restored the monastery in 1293. The renewal of architectural sculpture at the end of the thirteenth century in Macedonia and Thessaly (evidenced by the ambos at Serres and Ochrid)⁷¹ may also have depended on the reuse of marble pieces.

C. Barsanti, "Tunisia: Indagine preliminare sulla diffusione dei manufatti di marmo proconnesio in epoca paleobizantina," *Milieu* 2 (1990): 429–31. In contrast to the east, where rulers often resorted to Byzantine *spolia*, the Umayyads of Spain seem to have resumed the quarrying of marble in the late 9th century: P. Cressier, "Les chapiteaux de la grande mosquée de Cordoue . . . I," *MadrMitt* 25 (1984): 216–81, esp. 250, and idem, "Les chapiteaux de la grande mosquée de Cordoue . . . II," *MadrMitt* 26 (1985): 257–313, esp. 310.

⁶⁶ F. W. Deichmann, *Corpus der Kapitelle der Kirche von San Marco zu Venedig* (Wiesbaden, 1981); cf. also H. Buchwald, "The Carved Stone Ornament of the High Middle Ages in San Marco, Venice," *JÖB* 11/12 (1962–63): 169–209, and *ibid.*, 13 (1964): 137–70; F. Zuliani, *I marmi di San Marco* (Venice, 1970), and, with respect to spoliated Constantinopolitan pieces, reworked by 11th-century Venetian workshops, see S. Minguzzi, "Le transenne del matroneo della basilica di San Marco in Venezia," *CorsiRav* 41 (1994): 627–47. With respect to Norman Italy, see, for example, T. Garton, *Early Romanesque Sculpture* (New York–London, 1984), and P. Pensabene, "Contributo per una ricerca sul reimpiego e il 'recupero' dell'antico nel Medioevo: Il reimpiego nell'architettura normanna," *RIASA*, 3d ser., 13 (1990): 5–138.

⁶⁷ T. Pazaras, *Ανάγλυφες σαρκοφάγοι και επιτάφιας πλάκες της μέσης και ύστερης Βυζαντινής περιόδου στην Ελλάδα* (Athens, 1988).

⁶⁸ G. Mastoropoulos, "Μαῖστρος ὁ Κόητος, ἕνας μαρμαρᾶς τοῦ IB' αἰῶνα στὴ Νάξο," in *Αφιέρωμα στὸν Καθηγητὴ Ν.Β. Δρανδάκη* (Thessalonike, 1994), 436–43.

⁶⁹ E. A. Ivison, "Funerary Monuments of the Gattilusi at Mytilene," *BSA* 87 (1992): 423–37.

⁷⁰ U. Peschlow, "Ein paläologisches Reliefdenkmal in Konstantinopel," *Gesta* 33 (1994): 93–103.

⁷¹ T. Pazaras, "Πρόταση γιὰ αναπαράσταση τοῦ Ἀμβωνα τῆς Παλαιάς Μητρόπολης στὴ Βέρροια," *ΘΥΜΙΑΜΑ* (as above, note 64), 251–54.

Nonetheless, the search for fresh marble or polishable limestone expressly intended for church decoration could well have existed during the Byzantine period. At Chios the ancient quarry that was the source for *portasanta* seems to have been reopened expressly to adorn the Nea Moni.⁷² The development of church construction during the second half of the tenth and first half of the eleventh centuries in Phrygia and in Greece—notably on Mount Athos, in central Greece, and in the Mani—took place on a scale that might have necessitated quarrying. With respect to Phrygia, the abundance of material from the medieval period, over a short duration, suggests access to freshly excavated marble, but that remains to be proved: no medieval quarry sites are known, and reuses are ubiquitous. In Greece, the most puzzling case is that of the Mani, where even ancient edifices were scarce, as were by consequence reuses prior to the end of the eleventh century. From that time forward, however, the workshops of the *marmaras* Niketas and the *mastoras* Gregory yielded a great abundance of architectural ornamentation over a narrowly circumscribed area.⁷³ This activity seems to have persisted as late as the middle of the twelfth century.⁷⁴ One might well question whether in this case reutilization would have supplied the necessary quantity of marble.⁷⁵

In the Mani, the reuse of older material other than marble would not have been sufficient for the construction of churches to house the quantity of carved ornaments noted above. At St. Nicholas in Platsa in the Mani, the stone used for the lower part of the walls would have been quarried from a site near the structure, even before 900.⁷⁶ A. H. S. Megaw has noted the use in the eleventh century of a purple limestone, quarried locally, to create the polychrome facades at Hagios Soter in Gardenitsa and at Hagios Stratigos at Ano Boulario. He also mentions access, prior to the development of the cloisonné masonry technique, to poros, more easily worked than local marble and limestone, both of which were reserved for architectural sculpture.⁷⁷

In the twelfth century, in Boeotia, at Hosios Meletios, and at the Zoodochos Pege of Dervenosalessi, which must be the monastery of the Virgin Theometor (founded by the same hermit, Meletios the Younger, who, like Sabas, the great Palestinian *higoumenos*, was a tireless builder), the hard limestone quarries of Kakoniskiri provided a number of carved pieces (sarcophagi) and *omphalia* for pavements.⁷⁸ Columns at Sa-

⁷² C. Bouras, 'Η Νέα Μονή της Χίου (Athens, 1981), 153.

⁷³ N. B. Drandakis, "Νικήτας μαρμαράς," Δωδώνη 1 (1972): 21–44; idem, "Ο Ταξιάρχης της Χαρούδας καὶ ἡ κτιτορικὴ ἐπιγραφή του," Λακ.Σπ. 1 (1972): 275–91; idem, "Άγνωστα γλυπτά τῆς Μάνης ἀποδιδόμενα στό μαρμαρᾶ Νικήτα ἢ στό ἐργαστήρι του," Δελτ.Χριστ.Ἀρχ.Ἐτ. 4th ser., 8 (1975/76): 19–28; idem, "Ἡ ἐπιγραφή τοῦ μαρμαρίνου τέμπλου στή Φανερωμένη τῆς Μέσα Μάνης (1079)," Ἀρχ.Ἐφ. (1979): 218–25; idem, Βυζαντινές τοιχογραφίες τῆς Μέσα Μάνης (Athens, 1995).

⁷⁴ N. B. Drandakis, "Ο ναός τῆς Ἀγίας Τριάδος στό Μπρίκι τῆς Μέσα Μάνης (1708) μέ τά πολλά ἐντοιχισμένα γλυπτά," Λακ.Σπ. 10 (1990): 111–34. Among the reused pieces is a *templon* epistyle dated 1122.

⁷⁵ No study has been published regarding this aspect of carved stone from the Mani: Bouras, personal communication.

⁷⁶ Hadji-Minaglou, "Le grand appareil," 163–64.

⁷⁷ A. H. S. Megaw, "Byzantine Architecture in Mani," BSA 33 (1932–33): 154; Hadji-Minaglou, "Le grand appareil," 164–65.

⁷⁸ A. K. Orlandos, "Ἡ Μονή τοῦ Ὁσίου Μελετίου καί τά παραλαύρια αὐτῆς," ABME 5 (1939–40): 34–106 (references 67 and 76); C. Bouras, "Ἐπανεξέταση τοῦ Καθολικοῦ τῆς Ζωοδόχου Πηγῆς, Δερε-

marina in Messenia (12th century) do not seem to derive from spolia.⁷⁹ In Mistra in the fourteenth and fifteenth centuries, sarcophagi and the templa of the Pantanassa, the Sts. Theodore, and St. Demetrios are made of a marble quarried directly from sites behind the Hodegetria church and in the Eurotas valley.⁸⁰

Like the monuments themselves, written sources suggest only limited quarrying, tied to specific work sites. In the Life of St. Mary the Younger, the saint has a quarry opened near the site where she seeks to raise the church that will house her remains.⁸¹ The recourse to quarries adventitiously situated near the planned church must have occurred quite often, in particular outside ancient cities. There has been no systematic research, however, to establish an inventory of these sites. One of the rare examples of the opening of a large-scale quarry during the Byzantine period is found in Romania, in the large chalk hills of Tîbişir near the village of Murfatlar (in the county of Constanţa)⁸² in the quarries on the left slope of the valley of Karasu, or even those of Păcuiul Lui Soare. The latter—eight in number—have been the object of a valuable geographic survey. Although we lack written evidence to confirm it, they were supposedly opened by the Byzantines and would have made use of a Bulgarian workforce from the region of Pliska/Madara/Preslav, where a strong tradition of quarry workers thrived in the second half of the tenth century.⁸³

In some cases, stone was renounced altogether in favor of molded plaster, which appears in the tenth century at Mount Athos (in the crowning arches of despotic icons, templa, the cornices of the katholika at Protaton and at Vatopedi) and reappears in the eleventh on windows at Hosios Loukas. In Epiros, a region with very little marble, plaster was widely used in panel decorations, notably at Arta.⁸⁴

We thus have, lasting from the fourth to the seventh century (as a continuation of the Roman Empire), and disappearing thereafter, a highly centralized exploitation of marble, under state control (even when leased to private individuals and despite the existence of a number of independent quarries). At Constantinople, the imperial court

νοσάλεσι," Δελτ.Χριστ.Ἀρχ.Ἐτ. 4th ser., 17 (1994): 35. With respect to the importance of the sculpture from Hosios Meletios, cf. C. Vanderheyde, "La sculpture architecturale du Katholikon d'Hosios Meletios et l'émergence d'un style nouveau au début du XIIe siècle," *Byzantion* 64 (1994): 391–402.

⁷⁹ Bouras, personal communication.

⁸⁰ A. Kavvadia-Spondilis, "Remarks about the Byzantine Sculpture of Mystras: The Paleologan Templa," *Byzantium: Identity, Image, Influence. XIX International Congress of Byzantine Studies, University of Copenhagen, 1996. Abstracts of Communications* (Copenhagen, 1996), no. 5254.

⁸¹ AASS Nov. 4: appendix, *De S. Maria Juniore*, 698–99, § 17, trans. A. E. Laiou, "Life of St. Mary the Younger," in *Holy Women of Byzantium*, ed. A.-M. Talbot (Washington, D.C., 1996), 271–72. I am indebted to A. Laiou for this reference.

⁸² I. Barnea, *Christian Art in Romania*, vol. 2, *7th–13th Centuries* (Bucharest, 1981), 16–20, pls. 9–31, illustrating several chapels associated with quarry works in which graffiti with the dates 992 and 982 may be found.

⁸³ P. Diaconu and E. Zah, "Les carrières de pierre de Păcuiul Lui Soare," *Dacia* 15 (1971): 289–306. I am indebted to A. P. Kazhdan for this reference.

⁸⁴ The dissertation of C. Vanderheyde, "La sculpture architecturale mésobyzantine en Epire du Xe au XIIIe s." (doctoral thesis, Université de Paris I, 1996), provides a more detailed treatment of this problem.

maintained a traditional and symbolic recourse to the principal varieties of stone. These were no longer quarried directly (except perhaps in Phrygia in the tenth and eleventh centuries and in certain quarries with a local market, e.g., in the Mani) or to provide material for a specific structure. Reused pieces—abundant in cities such as Constantinople, Athens, and Thessalonike, or even brought in from more or less adjoining coastal regions—became a common device. These might have included whole pieces (bases, columns, capitals, sarcophagi), but also—and particularly extensively—wall revetment and *opera sectilia*. The use of spolia, a medieval phenomenon well attested also in the West and in the Islamic world, may be cloaked with layered meanings. To be sure, it sometimes reflected a scarcity of materials or an attempt to obtain them at a better price. It also, however, testified to a concern to enhance not only the beauty of a monument but also its dignity, by rooting it in a past to be sustained, resurrected, or even appropriated outright. It may also, by only a small shift of symbolic meaning, invest the monument with magical associations. Trophy, talisman, relic—spolia may thus have been systematically sought out and valued, in combination with newly quarried stones, which constituted the major part of new construction. The development of architecture in certain Greek towns whose pasts did not stretch back very far, and the construction of monasteries in rural areas at some distance from the coast, must have required the limited, occasional exploitation of new quarries.

At the same time, whether its constituent stone was reused or newly quarried, Byzantine sculpture from the tenth to the fourteenth century presents, in spite of its diversity, an incontestable homogeneity of inspiration, drawing the same serene grandeur from the representation of the human form that we find in the painted icon. Byzantine sculpture, like Byzantine painting, reaffirms the unity of the Orthodox world, but the light that it casts blazes less brightly. Its economic impact at the close of the empire was no longer comparable to what it had been in the fourth to the sixth century. At the moment when the western world was witnessing a vigorous rebirth of sculpture and the use of marble,⁸⁵ in the Ottoman Empire the ubiquity of carved wood sent stoneworking into eclipse, and the marble workers ceded pride of place to the *esnafia* of the *tayadori*.

⁸⁵ C. Klapisch-Zuber, *Les maîtres du marbre: Carrare, 1300–1600* (Paris, 1969). Despite this afflux of freshly quarried marble, trade in *spolia* was still a profitable business, particularly with respect to the western demand for colored marble. Cf. A. Laronde, “Claude Le Maire et l’exportation des marbres,” *BAntFr* (1993): 242–55.

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Essential Processes, Looms, and Technical Aspects of the Production of Silk Textiles

Anna Muthesius

A complex series of moricultural, sericultural, and yarn-producing processes were essential for the Byzantine silk industry. Today in Greece and the Balkans these labor-intensive processes have been radically transformed following the introduction of mechanization and the interbreeding of moths. Before World War II in Greece, raw silk (especially from Souffi) was characterized by a high gum content: small golden-yellow cocoons produced low yields of degummed, golden-yellow raw silk. The equivalent cocoons today are large and white, and they contain little waste gum. This results in a far higher yield of raw silk.¹ Within little more than half a century, raw silk production has been transformed beyond recognition. The same has happened in the Balkans. For this reason, it is generally unsatisfactory to compare contemporary Greek and Balkan practices with those of Byzantine times. Only the nonmechanized silk industries of rural China and India remain unaffected: they act as time capsules that provide living evidence for the intricacies of ancient silk production.²

An unfortunate absence of relevant Byzantine sources concerning the essential processes renders it necessary to turn to non-Byzantine documentation. Chinese sources are particularly relevant, because sericulture was transposed to the Mediterranean from China.³ A key surviving Chinese agricultural treatise, the *Keng tschi tu*⁴ of A.D. 1149

¹ There is no standard bibliography for this topic, but extensive source literature has been gathered in A. Muthesius, *Studies in Byzantine and Islamic Silk Weaving* (London, 1995), studies 7, 11, 16, 17. See also, A. Muthesius, *Byzantine Silk Weaving: A.D. 400 to A.D. 1200*, ed. J. Koder and E. Kislinger (Vienna, 1997), chap. 1. A unique pre-World War II yellow silk cocoon and a hank of yellow (gummed) raw silk was given to the author in 1991 by D. Sakelaridis, the last remaining handwoven silk manufacturer of Souffi.

² For example, see A. Hieromakh, *The Chinese Silk Industry Compiled from Chinese Works* (in Russian) (St. Petersburg, 1865). For a specialized bibliography on contemporary rural Chinese and Indian moriculture, sericulture, and raw silk/silk yarn production, see Muthesius, *Byzantine Silk Weaving*, chap. 1.

³ D. Kuhn, *Textile Technology: Science and Civilisation in China* (Cambridge, 1988), 5.9:421 and 301–2 with bibliography. Y. Tazima, *Silkworm Moths: Evolution of Domesticated Animals* (London, 1984). Cf. M. L. Ryder, “More on Silk in Ancient Egypt,” *Archaeological Textiles Newsletter* 18–19 (1994): 23.

⁴ For the *Keng tschi tu* (also spelled *Keng Chih Thu*), see O. Franke, *Ackerbau und Seidengewinnung in China* (Hamburg, 1913).

provides a detailed account of moricultural, sericultural, and silk yarn-producing techniques.

Moriculture: Planting, Cultivation, Leaf Harvesting, and Pruning

The *Keng tschi tu* indicates that four main activities were essential for successful mulberry growing. In China, mulberries were planted on both flat and terraced land. The first question that arises is how were they grown in Byzantium? There seems to be no documentary evidence regarding this issue. However, if widespread cultivation across mountainous regions of Asia Minor is to be envisaged, the question of terraced mulberry plantations becomes important.

The same Chinese treatise indicates that mulberry seeds planted in spring took about a year to grow into saplings ready for transplanting. The saplings grew to maturity in fifteen years. Byzantine mulberry cultivation in mid-eleventh-century Calabria, as described in the *Reggio Brebion*, the land register of the Byzantine metropolis of Reggio, discussed below, indicates that only mature trees were taxable.⁵

The *Keng tschi tu* emphasized an interrelationship between the nature and size of the mulberry grown and the time and frequency of subsequent leaf harvest. Evidently a continuous supply of fresh mulberry leaves could be ensured only with very careful planning. Timing and rotation of mulberry leaf harvests dictated the number and frequency of silkworm crops reared. It was not simply a matter of a single crop a year.

In Byzantium one knows that in the tenth century there was reliance on foreign imported raw silk, and this, together with the strict regulations against exporting Byzantine raw silk, suggests an overall scarcity of raw silk supplies. In light of the Chinese evidence about multiple crops of silkworms, one wonders why Byzantium could not independently supply its own industry. Was the production of raw silk too restricted and too highly taxed to attract sufficient investment? Alternatively, was local production simply too disrupted because, politically speaking, the plantations were sited in particularly vulnerable regions (first in Syria, later in Asia Minor)?

The *Keng tschi tu* indicates that the mulberry required well-dug soil, preferably irrigated. One may inquire how far the development of irrigation systems might have affected Byzantine mulberry cultivation. Well-irrigated plantations would have been larger, as irrigated trees needed to be more widely spaced. Such plantations would also have significantly increased the volume of raw silk production. Greater production in turn would have meant a larger industry. The growth of sericultural activity in the provinces in the eleventh to twelfth centuries, discussed below, could perhaps best be considered in relation to the development of irrigation systems in Byzantium in general. A. Harvey has indicated that in Byzantium, between the ninth and the eleventh century in particular, considerable interest was shown in the construction of elaborate irrigation systems.⁶

⁵ A. Guillou, *Le Brébion de la métropole byzantine de Reggio* (Vatican City, 1974), 17 and n. 2. Reggio was the capital of the theme of Calabria.

⁶ See A. Harvey, *Economic Expansion in the Byzantine Empire, 900–1200* (Cambridge, 1989), 134–35 and 146, and source references in the accompanying footnotes.

The *Keng tshi tu* clearly shows that in China sericulture was an ancillary occupation of farming communities. The farmers were the silkworm breeders. To what extent was this also true in Byzantium, and to what extent did landed magnates invest in mulberry plantations? One does know that, in the tenth century, wealthy individuals in Constantinople were permitted (within their own homes) to manufacture silks for personal use.⁷

Sericulture

The *Keng tshi tu* indicates that the demands of raising silkworms were even more exacting than those of tending mulberry plantations. Large silk worm crops in mediaeval China were the responsibility of commercial breeders. A Chinese source of the twelfth to thirteenth centuries entitled the *Farmers' Essentials* detailed the precise activities of commercial breeders working in a thirteen bay silk worm rearing house.⁸

At what point did commercial breeders appear in Byzantium? In the sixth century the private silk industry was dependent on state-controlled, imported raw silk supplies. By the tenth century, raw silk was produced in the hinterland, and imported raw silk was commercially available in Constantinople. The rise of Byzantine commercial breeding enterprises in the tenth century can be seen as heralding an increasing decentralization of raw silk supplies in the eleventh to twelfth centuries.

The Byzantine commercial breeders must have adhered to rules like those set out in the *Keng tshi tu* and in other Chinese treatises. These reveal that, after shedding their skins either three or four times according to their breed, silkworms were ready to spin twenty-eight to thirty-five days after hatching. The Chinese silkworms described in the *Farmers' Essentials* were set on suspended trellises and encouraged to spin by warming. The Chinese *Book of Sericulture* of Sun Kuang-Hsien (died 968) revealed how warming also prevented the silkworms from wandering while they were spinning their cocoons.⁹

It is clear from the Chinese documentation that, after spinning, cocoons were either stored in salted jars, stifled by cooling, or speedily unraveled according to need. The question is in what form did Byzantium receive its imported raw silk? The *Book of the Eparch* indicates that both domestic and foreign imported raw silk was reaching Constantinople in the tenth century. Although the transport of salted cocoons from afar would have been a possibility, it would have been more satisfactory for the silk to have arrived in the form of unraveled and reeled silk. Salted silk cocoons would have been brittle and would have yielded poorer silk yarn. Foreign cocoons would also have been bulky to transport over long distances and unprofitable to carry (especially in relation to their raw silk yield and selling price). On the other hand, locally produced cocoons would not have had high transportation costs as they would not have had far

⁷ J. Koder, ed., *Das Eparchenbuch Leons des Weisen* (Vienna, 1991), 104–5.

⁸ For the *Farmers' Essentials* and further sources, see Kuhn, *Textile Technology*, 285–433, and also Bibliography A, 440–53.

⁹ For the *Book of Sericulture*, see Kuhn, *Textile Technology*, 334 and 340.

to travel, and they would not have required salting. They could have been swiftly unraveled by appropriate members of the silk guilds of Constantinople, as discussed below. It is most plausible to suggest that both cocoons and unraveled raw silk were arriving in Constantinople in the tenth century. But it is more likely that local unsalted cocoons would have been traded rather than foreign salted cocoons. The exclusion of brittle, foreign, salted cocoon yarn would have protected the high reputation of the silk industry of Constantinople.

Production of the Silk Yarn

The production of the silk yarn was a laborious and specialized activity. In medieval China, as illustrated in a handscroll datable ca. A.D. 1200–1210, special reeling stoves were evolved (compare those of rural India today).¹⁰ These stoves consisted of a basin above a fire. The cocoons were floated in the basin in a bath of heated water, and their surface was teased to loosen the end of the silk thread of each cocoon. The individual silk starting threads were then fed through separate hooks and led onto a reeling device. Different numbers of cocoons were reeled simultaneously to produce silk yarns of varying weights. The medieval Chinese silk yarns ranged from very fine (the equivalent of see-through silk stockings today) to heavy silk furnishing fabric quality. Surviving Byzantine silks also use very variable weights of silk yarn, which would argue for the early existence of reeling basins in Byzantium.

During reeling, little twist could be added to the threads, and to strengthen silk yarn intended for warps, extra twist (up to 2,000–3,000 turns per meter) had to be added. In China, first the spindle whorl and then, by the tenth to the eleventh century, the spindle wheel were developed for the purpose of adding twist to silk threads.¹¹ In Byzantium, judging by the high twist on warps of surviving silks, there can be no doubt that some form of spindle wheel existed by the tenth to eleventh century.

The Value of a Practical Approach to the Byzantine Sources

All this detailed information is helpful if one wishes to adopt a practical approach to Byzantine sources and avoid mistakes of interpretation. First, it is imperative to acknowledge that the immense complexity of essential processes involved in silkworm breeding (as only briefly outlined above) precludes the possibility that sericulture was introduced “overnight” into the Byzantine Empire in the sixth century, as purported by Prokopios and Theophanes. These authors merely demonstrate the general truth that sericulture penetrated deeper into the empire in the sixth to seventh century. The earliest documented Byzantine silkworms (most plausibly mulberry plantations as well) were located in fifth-century Byzantine Syria.¹²

¹⁰ Kuhn, *Textile Technology*, 60–155, 345–403, esp. fig. 222 on 356.

¹¹ *Ibid.*, 156–236, 404–17.

¹² “From Seed to Samite: Aspects of Byzantine Silk Weaving,” in Muthesius, *Studies*, study 7, 120–22. Cf. M. Kordosis, “The Name Fu-Lin (= Romans),” in *Ιστορικογεωγραφικά* 4 (1994): 171–78.

Prokopios argued that imperial regulation of silk prices had a ruinous effect on the provincial nonimperial silk industry. R. Lopez interpreted Prokopios' account to mean that the emperor had set a ceiling price of 8 nomismata per pound for the purchase of imported raw silk, but N. Oikonomides took this to refer to silk garments. This low price meant that foreign producers would not sell. If this was true, how did the imperial silk industry survive? Were there imperial mulberry plantations and imperial sericultural establishments to supply the imperial industry? If so, where were these situated? Is it possible that the imperial estates in Syria under the care of Magnos the Syrian, the *kommerkiarios* (silk official), included mulberry plantations? Without further documentary evidence, this is uncertain, but it must remain a possibility.¹³

The *Peri Metaxes* sets a ceiling price of 15 nomismata per pound for raw silk. The problem is to reconcile the 8 nomismata ceiling set for raw silk/woven silk garments described above with the ceiling price stipulated by the *Peri Metaxes*. The difficulty lies in dating the *Peri Metaxes*. Some scholars have suggested that it can be dated before 540, under Justinian, but Oikonomides suggested that the 15 nomismata ceiling price may have acted as only a nominal figure and that it is difficult to date.¹⁴

These ideas need to be balanced from a practical point of view. If raw silk cost a maximum of 15 nomismata per pound at the time of the *Peri Metaxes*, one can envisage that a lightweight shift dress (2 pounds in weight) could be woven for around 30 nomismata. On the other hand, if 8 nomismata was the ceiling for silk garments as against raw silk, the garments in question at a time contemporary to the *Peri Metaxes* would have to have been very lightweight indeed. Only a very flimsy dress could be produced from half a pound of silk. Surviving sixth-to-seventh-century Byzantine silks are all relatively heavyweight textiles: all would have weighed far more than half a pound if made into garments.¹⁵

Concerning the distribution of mulberry plantations and the production of raw silk, the evidence of the seals of the *kommerkiarioi* is important. The earliest seal of a *kommerkiarios* belonged to an officer based in Antioch under Emperor Anastasios (491–518). It is evident that the *kommerkiarioi* originally acted for the state but that subsequently they could draw their own profits. The seals reflect the main thrust of sericultural activity across the Byzantine Empire up to the twelfth century: sericulture evidently passed from Syria to Asia Minor and then into the Balkans.¹⁶ Building on the evidence of the seals, I have suggested that there were five stages of raw silk acquisition up to the twelfth century:¹⁷ (1) an initial phase centered in Syria before the fall to the Arabs (5th–7th centuries); (2) a subsequent stage of sericultural activity within Asia Minor

¹³ "The Byzantine Silk Industry: Lopez and Beyond," in Muthesius, *Studies*, study 16, esp. 258–59 and 276.

¹⁴ "Constantinople and Its Hinterland: Issues of Raw Silk Supply," in Muthesius, *Studies*, study 17, esp. 321–22.

¹⁵ Muthesius, *Byzantine Silk Weaving*, chap. 12, app. A3, cat. nos. M4–M6b; cf. cat. nos. M9–M12, M16, M19–M24.

¹⁶ N. Oikonomides, "Silk Trade and Production in Byzantium," *DOP* 40 (1986): 33–53.

¹⁷ Muthesius, *Studies*, study 17, 315–35.

(8th–9th centuries); (3) a third period of activity concentrated in western Asia Minor and the Balkans (9th–10th centuries); (4) a further initiative that saw the importation of Syrian silks to boost domestic supplies (10th century); (5) finally, a decentralization of raw silk supply (11th–12th centuries). Provincial Byzantine raw silk (Sicilian and Calabrian) appeared on the market at Fustat. Italo-Byzantine, provincial Byzantine silk from Asia Minor as well as imported Islamic raw silks may have been available for use by weavers in the Peloponnese.

The general picture that emerges between the fifth and the twelfth century is one of selective expansion and of increasing decentralization. It is insufficient just to chart these developments. From a practical point of view, these changes in raw silk supply had many ramifications for Byzantine weavers. The quality and nature of silk yarn would have governed both weaving technique and ease of production of designs current at any one time. The slightest change in yarn supply affected both the preparation of the loom and the subsequent execution of the design. Such changes of raw silk supply had to be accommodated by skilled weavers who could envisage how techniques and designs had to be adapted to fresh supplies of yarn.

The fact that five major shifts of yarn production can be discerned, and that domestic supplies also had to be supplemented by imported supplies, indicates that Byzantine weavers must always have been a highly skilled workforce. The specialist divisions of labor as described in the *Book of the Eparch* (discussed below) encouraged the maintenance of high standards.¹⁸

It is difficult to pinpoint the exact location of mulberry plantations before the year 1200. The first Byzantine source that specifically details a substantial mulberry plantation is the *Reggio Brebion*. In the *Reggio Brebion*, mature mulberry trees (i.e., those more than fifteen years old) were subject to imperial taxation at the rate of 2,436 taria (4 taria to the dinar). It is not stipulated whether or not the mulberry leaves were fed to silkworms, although the existence of extensive moricultural and sericultural activity in Calabria in later times would suggest that silk production was involved. The possible size and quality of the Byzantine Calabrian raw silk yield have been much discussed. As demonstrated elsewhere, a practical approach is helpful for an accurate interpretation of this document.¹⁹

Weaving Techniques and Looms

Weaving techniques impose limitations on the types of designs that can be woven on silks. In turn, weaving techniques are dependent on the types of looms used. In Byzantium it was necessary to devise looms with special pattern-producing devices (pattern harnesses) to accommodate increasingly intricate pattern motifs. But sophisticated looms were of no use without skillful weavers. Manual dexterity had to keep pace with

¹⁸ Koder, *Eparchenbuch*, 90–107.

¹⁹ Guillou, *Le Brébion*, 163–201. Guillou's figures were first questioned in A. Muthesius, "Eastern Silks in Western Shrines and Treasuries before 1200 A.D." (Ph.D. diss., Courtauld Institute of Art, University of London, 1982), 254–63. See also Muthesius, *Byzantine Silk Weaving*, chap. 13.

technological development to produce silks of the high quality demonstrated by the surviving Byzantine textiles.²⁰

The main weaving techniques found on the surviving Byzantine silks dating before the thirteenth century are: tabby, damask, twill, lampas, and tapestry weaves. (Satin weave, in which the horizontal thread or weft was permitted to pass over four or more vertical threads or warps before being bound down, was not developed until the 13th to 14th century).²¹ It is useful to define these five weaving types in conjunction with the evidence of surviving examples.

Tabby Weave

In tabby weave the horizontal or weft thread is passed alternatively over one and under one vertical or warp thread (Fig. 1, 1A). All the warps that lie above the weft in the first pass of the thread across the loom lie below it in the next, above it in the third pass, and so on. Tabbies may have either one or two systems of warps and wefts. In tabbies with a second warp, this is hidden between the upper and the lower surface of the weave, and it acts merely to guide the weft to the obverse or the reverse of the fabric.

Some early tabbies with a single warp and weft also employed floats of weft threads for patterning effects. Here the wefts are floated over a tabby to produce simple geometrical designs.²²

Damask Weave

Damask is a weave with a single warp, and the fabric is reversible (Fig. 1, 1D). The threads are bound in twill. There are two faces to twill binding. Where the weft predominates, a weft-faced weave results; but where the warp predominates, a warp-faced twill is formed. The damask contrasts the warp and the weft faces of twill binding.

Twill binding itself, in the case of weft-faced twill, means that the weft is passed over two or three warps and then under one warp, over two or three warps and under one, and so on from one side of the loom to the other. Each successive row begins one warp further in, creating a diagonal furrow down the silk as weaving progresses. The same binding occurs using the warps instead of the wefts in warp-faced twill binding.

Damasks are monochrome weaves that rely on changes in weave rather than on color contrasts for the formation of the pattern.²³

Twill Weave

Twill binding, as described above, is used for this weave (Fig. 1, 1B). There are two warps: a binding warp that secures the weft at required intervals, and a main warp,

²⁰ For standard technical terms, see *Vocabulary of Technical Terms (CIETA)*, ed. D. King (Lyons, 1964). For surviving Byzantine silks, consult Muthesius, *Byzantine Silk Weaving*, app. A1–A4, and chap. 2, introduction to hand draw-loom.

²¹ See King, *Vocabulary*, under names of individual weaves. Another term for tabby is *taffeta*.

²² *Ibid.*, 48.

²³ *Ibid.*, 11.

which sits between the two faces of the weave but does not appear either on the surface or the obverse of the weave. The main warps are lifted or lowered according to the needs of the design, and the action of the main warps determines the correct opening of the sheds for the weaving of the patterns. Main warps are either single or paired in Byzantine silk twills.²⁴ They are of degummed silk twisted to the right (Z).

Central Asian silk twills of the seventh to tenth century used main warps grouped in three to fours and twisted to the right (Z). Later Central Asian twills used paired, gummed silk warps that did not require twisting. They often imitate Byzantine designs but are easily distinguishable from Byzantine twills.²⁵

Byzantine silk manufacture appears to have been largely dominated by twill weaves. Twills were most often polychrome, but in the tenth to eleventh century a fashion also emerged for monochrome twills on which the designs appeared through a change in weave rather than by virtue of color contrasts.

Lampas Weaves

Lampas weaves were developed in both Byzantium and the Islamic Mediterranean around the year 1000 (Fig. 1, 1c). In the Islamic world they were widely woven in Spain and Iran. They are monochrome silks that rely on changes in weave rather than on color contrasts for the formation of their patterns. In early Byzantine lampas weaves, the main warps did not help to bind the wefts, but in developed lampases they did do so.

Two types of developed lampases can be distinguished: tabby, tabby lampas weave and tabby, twill lampas weave. In tabby, tabby lampas weave, the two faces of tabby binding (weft and warp faces) are contrasted to create the design. In tabby, twill lampas weave, tabby and twill bindings are contrasted to delineate patterns (Fig. 1, 1e).

The main warps in lampas weaves are grouped in sets containing combinations of single, paired, or tripled main warps. The groupings of such warps may serve to characterize certain groups of silks (e.g., Spanish lampases as distinguished by D. Shepherd).²⁶

Tapestry Weave

Tapestry weave silks do not survive in large number, but Byzantine examples show the use of the slit tapestry technique (Fig. 1, 1f).²⁷ Here each color area is separated from the next by a slit in the weave. The slits occur where the wefts of one color are turned back upon themselves rather than being carried over into the next color area of the design.

²⁴ Ibid., 52.

²⁵ Muthesius, *Byzantine Silk Weaving*, chap. 10.

²⁶ King, *Vocabulary*, 28. Muthesius, *Byzantine Silk Weaving*, chap. 9, cat. nos. M968, M1044–1045, M1023, M1034, M1035, M951, M1046, M1033, M1024, M1022, and M953, corresponding to the group discussed in D. Shepherd, "The Hispano-Islamic Textiles in the Cooper Union Collection," *Chronicle of the Museum for the Art of Decoration of the Cooper Union* 1. 10 (1943): esp. 365–377. Further relevant references are in Muthesius, *Byzantine Silk Weaving*, chap. 9, n. 33.

²⁷ King, *Vocabulary*, 49.

Medieval Looms

A history of the Byzantine hand draw-loom has not yet been written.²⁸ Surviving pictorial representations of Byzantine looms do not provide any idea of the complexity of the actual looms that must have existed to produce the surviving Byzantine silks. Simple horizontal looms are depicted with shafts but without any form of developed pattern-producing device or “figure harness” that would have been essential for weaving the intricate Byzantine patterns that survive.²⁹ The Byzantine looms must be envisaged with reference to the surviving silks and also in conjunction with documentary evidence for advanced hand draw-loom weaving in Chinese sources.³⁰

J. Becker has suggested that a number of stages can be discerned in what he termed the development of “mechanical patterning” (i.e., in hand draw-loom weaving).³¹ He suggested a move from the use of pattern-weaving devices or pattern heddle rods (sticks inserted into the warps and lifted as required) to true pattern shafts (devices used to create the correct sheds through which the weft was passed). Next he envisaged the development of a form of cross harness whereby strong cords were attached to individual warps across the loom by way of heddle loops. The cords were then knotted to a vertical draw string and suspended above the loom. The draw strings were pulled in the correct order for the opening of the sheds required for the creation of more complex designs. This form of loom is still operational in India today, but it does not seem to have been characteristic of medieval China.

In China there appears to have been a hand draw-loom with a pattern harness placed in a frame behind shafts on the loom. Looms of this type, with two shafts and with a draw harness and individually weighted harness cords, are depicted on a Chinese scroll of the Sung period (960–1277).³² A reconstruction of this type of loom was exhibited in Belgium in 1989, and its construction was based on a nineteenth-century loom from Beijing.³³ The 1989 loom did not have a device for the automatic repeat of the pattern, as did the Beijing loom. Byzantine hand draw-loom after the tenth century probably did include a device for the repeat of patterns, judging by the evenly sized repeats of important extant silks.³⁴

A developed hand draw-loom with pattern-repeating device must be envisaged for Byzantine silks such as the Aachen Elephant fabric of the early eleventh century.³⁵ This

²⁸ J. Becker, *Pattern and Loom* (Copenhagen, 1987), brought together some valuable experimental material prior to his death. See further Muthesius, *Byzantine Silk Weaving*, chap. 2, nn. 1 and 7.

²⁹ For the term *figure harness*, see King, *Vocabulary*, 18.

³⁰ D. Kuhn, *Die Darstellung des Handwebstuhls in China: Eine Untersuchung zum Webstuhl in der chinesischen landwirtschaftlichen Literatur vor dem 19. Jahrhundert* (Cologne, 1975).

³¹ Becker, *Pattern and Loom*, chap. 11, 253–73.

³² *Ibid.*, 262, fig. 244, and 264–65, figs. 246–48. See also, D. De Jonghe, “Métiers à tisser chinois,” in *Chine ciel et terre: 5000 ans d’inventions et de découvertes*, exhib. cat., Musées royaux d’art et d’histoire, Brussels, 16 September 1988–16 January 1989, 273.

³³ *Ibid.*, 185, illustrates modern versions of the 19th-century Beijing type of loom.

³⁴ Muthesius, *Byzantine Silk Weaving*, chaps. 4 and 5.

³⁵ *Ibid.*, chap. 4, and cat. no. M58.

used asymmetrical motifs more than a meter wide enclosed in foliate medallions. Each design required 1,440 manipulations of a pattern-producing device on the loom for the creation of its design. For such a silk to be woven at all, a very sophisticated draw-loom must have existed in the imperial Byzantine workshop at Zeuxippos named in the inscription of the silk.³⁶

Becker suggested that the most advanced hand draw-loom had comber boards, a device for evenly spacing the warps across the loom, but he did not discuss whether this was a device of the Byzantines or a later European development.³⁷ Essentially, Becker distinguished three types of hand draw-loom: an Indian or Persian type with cross harness, a Chinese type with individually weighted draw cords, and a developed European draw-loom with comber board.³⁸ D. de Jonghe divided the looms into essentially two types: those with simple heddle rods and those with necking cords and comber board.³⁹ W. Endrei discerned no fewer than twelve different types of medieval looms.⁴⁰

D. Kuhn distinguished four forms of the Chinese hand draw-loom alone, datable before the thirteenth century.⁴¹ One Chinese source details the exact construction of hand draw-loom, but the account breaks off at the very point of describing the construction of the pattern-producing device, the figure harness.⁴²

Overall one must conclude that it is not possible to see a single line of development throughout. Different workshops would have required different kinds of looms for a variety of weaves. The skill of individual weavers also would have dictated the form and use of a number of looms. Small-scale workshops weaving simple patterns required looms different from large-scale workshops weaving complex and costly pieces. The surviving Byzantine silks give a clue to the stage of development of Byzantine hand draw-loom at different periods between the sixth and the twelfth century.⁴³

Byzantine Looms

Unpatterned or simply ornamented Byzantine silks, including some examples that survive in Sens, could have been woven on looms with relatively simple pattern-producing

³⁶ Ibid., chap. 4, sec. 4.2 and n. 41 for Zeuxippos. Also nn. 37, 39, and 40, for a full discussion of other terms in the Aachen Elephant silk inscription.

³⁷ Becker, *Pattern and Loom*, 253–54, 266, 268, 270, 278, 284, for comber boards.

³⁸ Ibid., 257–70.

³⁹ D. de Jonghe, “Les moyens de façonnage et leurs caractéristiques,” in *Le métier à tisser aux baguettes: Influences orientales dans les costumes polonais et hongrois* (Paris, 1986), 9–16.

⁴⁰ W. Endrei, “L’origine du tissage des grands façonnés,” *L’industrie textile* 4 (1957): 303–7.

⁴¹ See Kuhn, *Textile Technology*. The earliest depiction of a complex hand draw-loom that exists occurs on a Chinese wall painting situated in a hall built between 1073 and 1096. It is illustrated in D. Kuhn, *Die Song-Dynastie (960–1279): Eine neue Gesellschaft im Spiegel ihrer Kultur* (Weinheim, 1987), 386–87.

⁴² D. Kuhn, *Die Webstühle des Tzu-jen i-chich aus der Yüan Zeit* (Wiesbaden, 1977), 66–75.

⁴³ Muthesius, *Byzantine Silk Weaving*, cat. nos. M1–M90, serve as examples.

devices.⁴⁴ However, by the seventh to eighth century, some form of advanced pattern-producing device would have been necessary on Byzantine looms. There may not at first have been devices for automatic repeat of the pattern, as irregularly sized lion-strangler motifs on a Sens silk demonstrate.⁴⁵ But to weave hunter and charioteer themes like those of surviving Byzantine silks at Aachen, sound pattern-producing devices or figure harnesses must have existed.⁴⁶

Unfortunately, no pieces of looms have been excavated in archaeological digs. Brick-lined trenches were discovered in monks' cells at the monastery of Epiphanius in Thebes, but suggestions that these might once have contained horizontal looms with treadles have been dismissed.⁴⁷ Documentary sources are more forthcoming. For instance, St. Theodoret of Cyrrhus in Syria, in his treatise *On Providence*, described a working loom:⁴⁸ "Female hands take and spin fine threads. After stretching some threads in order on the looms, they insert the wefts. With the rods they separate the warps, and they loosen some or tighten some attached threads, and the weft thread is then pushed across and beaten down, and so they make the cloth. . . . And . . . who would admire how from the one color of the underlying wool or silk threads, myriad images of various animals and human forms, some hunting and some praying, and pictures of trees and many other things are woven." This passage clearly indicates shed sticks and draw loops in use on Byzantine looms in Syria by the fifth century. It is difficult to reconstruct exactly how the patterning device looked, but it is reasonable to suggest that such a loom could have been developed independently of any Chinese prototype. Chinese silks were predominantly warp faced, whereas Byzantine silks were weft faced. Chinese looms, in any event, would not have been ideally suited to Byzantine weaving techniques.

From the early beginnings of a draw-loom with figure harness system in Syria, more developed systems grew. The most advanced draw-looms may have been built under imperial patronage. The imperial Aachen Elephant silk, of the early eleventh century, demonstrates that such looms were available for the weaving of splendid silks. In modern-day India there are experiments with building hand draw-looms that help indicate the complexity of some of the advanced Byzantine hand draw-looms that existed. For example, one hand draw-loom at a Government Weavers service center in Bangalore in India in the late 1980s was capable of 1,400 steps to produce a pattern repeat.⁴⁹ The Bangalore loom was more than 2 m wide and operated by a total of four weavers. Two weavers were seated at the front of the loom (on either side), and two more weavers sat facing them on a plank supported above the warp. Each of the four weavers controlled the pattern across one-quarter of the width of the loom. Other advanced hand draw-looms in India in the 1980s had pattern-producing devices suspended high

⁴⁴ Ibid., cat. nos. M120a–M322.

⁴⁵ Ibid., cat. no. M44.

⁴⁶ Ibid., cat. nos. M28–M29.

⁴⁷ Muthesius, *Byzantine Silk Weaving*, chap. 2 and n. 26.

⁴⁸ Theodoret of Cyrrhus, *De providentia oratio* 4, PG 83:617–20.

⁴⁹ B. B. Dutta and A. N. Dutta, *Multi-tier Jala System on 260 cms. R. S. Handloom* (Bombay, 1987).

above the warps, and up to six draw-boys were sometimes required to operate such devices. Such intricacies should be borne in mind when trying to envisage the Byzantine loom that wove, for example, the Aachen Elephant silk with its 1,440-step pattern repeat.

A number of eighteenth- and nineteenth-century sources depict advanced Chinese draw-looms with the weavers seated in front of the loom and with a draw-boy seated in a wooden structure high above the loom.⁵⁰ Whether the Byzantine hand draw-looms employed this system, or whether the draw cords were led down to the side of the loom to be worked by draw-boys situated on the ground is not documented.

J. Wild and others have demonstrated how early damasks could be woven on relatively simple looms.⁵¹ But a significant development had occurred by around the year 1000 using some form of far more advanced Byzantine hand draw-loom. At that date, Byzantine hand draw-looms (largely built to accommodate the predominant twill weave) had to be adapted to weave lampas weaves. Monochrome lampas weave silks could be produced more cheaply than their polychrome twill counterparts. This was because in lampas the main warps as well as the binding warps were used to bind the patterns, making less labor-intensive lifting of warps necessary to produce identical patterns. Different griffin plus panther design silks were taken from the grave of Pope Clement II (died 1047).⁵² Some of these were woven as twills, others as lampases, and they demonstrate perfectly this transitional stage of development in Byzantine silk weaving. Without doubt, such advances in Byzantine weaving technology were driven by economic concerns.

Byzantine Dyes and Dyeing Techniques

The scientific study of Byzantine dyes is relatively new. To the naked eye, the extant Byzantine silks reveal that a wide color palette was in use by the twelfth century. In particular, the silks indicate that color ranges varied according to period fashions. For instance, a bright polychrome palette of reds, blues, greens, ochers, and off-whites was in vogue in the eighth to ninth century. By the tenth to the eleventh century, side by side with a still comparatively brightly colored mixed palette, monochrome tones were in demand. Single-color golden yellow, purple-blue, olive green, or cherry red Byzantine silks (either incised twills or lampas weaves) datable to the tenth to eleventh century, survive in quantity.⁵³

Early sources show initially how far Byzantine textile dyeing was dominated by concerns to build up and then protect an imperial monopoly over the use of certain murex purple dyes. Such dyes were reserved to treat specially tailored imperial garments. The

⁵⁰ Becker, *Pattern and Loom*, 262–63.

⁵¹ J. Wild, “Tunic No. 4219,” *Riggisberger Berichte* 2 (1994): 9–36.

⁵² Muthesius, *Byzantine Silk Weaving*, chap. 9, cat. nos. M69, M71, M88.

⁵³ Muthesius, *Byzantine Silk Weaving*, chap. 3, with special bibliography. Also see app. A1 cat. nos. M45–M46 (for 8th–9th centuries, polychrome examples) and cat. nos. M77a–b, M86–M88 (for 10th–11th centuries, monochrome examples).

Theodosian and Justinianic codes, and later the *Basilics* and the novels of Leo VI all strongly underline the imperial exclusivity of these murex purple dyes.⁵⁴

G. Steigerwald traced the growth of an imperial monopoly over murex purple from late Roman to early Byzantine times.⁵⁵ He demonstrated that up to the period of Theodosios I (383–395), it was only the purple chlamys that was exclusively reserved for imperial use. Nevertheless, Theodosios I reinforced the edicts of his imperial predecessors Gratian (367–383) and Valentinian II (375–392) and also forbade private manufacture and use of “blatta, oxyblatta, hyacinthina, and their imitations.” Not until the time of Theodosios II (408–450) were specific dress regulations encoded in “De vestibus holoveris et auratis” of the year 424. Steigerwald convincingly argued that the latter did not provide for an imperial monopoly over all murex purples but only over murex-dyed textiles of particular imperial cut. Up to this time members of the Senate as well as private, wealthy Byzantine citizens had worn murex purples. Justinian found it necessary to repromulgate the edict of 424, which suggests that it had met with some opposition in the fifth to sixth century. A Theodosian Code edict of 333 demonstrates the existence of fraudulent dyeing practices in the imperial purple dyeing factory, and it suggests that a black market existed. A further edict of 436, repromulgated under Justinian, drew attention to illegal dyeing in the imperial purple factory of Phoenicia.⁵⁶

Justinian did release imperial half-blatta silks for use by wealthy females in the sixth century, but the practice did not last long.⁵⁷ Leo VI (886–912) allowed citizens to wear clippings of imperial purple, and he castigated his predecessors for earlier denying the populace even this right.⁵⁸ The *Basilics*, on the other hand, forbade illicit manufacture of murex purple on pain of death.⁵⁹ The *Book of the Eparch* of Leo VI (911/912) divided silks into those totally forbidden for nonimperial manufacture and those to be manufactured by the private silk guilds in Constantinople, but only under the supervision of the eparch.⁶⁰ A wide range of variously colored purples were cited among these silks. (Murex is a light-sensitive dye that can range from yellow, green, blue, red-purple, and deep blue purple to near black.) Elsewhere I have discussed in detail some specific terms for such purples, many of which occur in the Baggage Train account of the *Book of Ceremonies*.⁶¹

⁵⁴ Relevant legislation is discussed by P. Pieler in H. Hunger, *Die hochsprachliche profane Literatur der Byzantiner* (Munich, 1978), 2:400–472.

⁵⁵ G. Steigerwald, “Das kaiserliche Purpurprivileg in spätrömischer und frühbyzantinischer Zeit,” *JbAC* 33 (1990): 209–39.

⁵⁶ *CTh* 1.32.1 (A.D. 333), 18.10.20. (A.D. 436).

⁵⁷ *CIC*, *CI* 2.9.3, discussed in Steigerwald, “Kaiserliche Purpurprivileg,” 226.

⁵⁸ P. Noailles and H. Dain, *Les Nouvelles de Léon VI, le Sage* (Paris, 1944), 272ff.

⁵⁹ *Bas.* 19.1.30. See *Basilicorum libri*, 60, ed. H. J. Scheltema, N. van der Wal, and D. Holwerda (Gröningen, 1960), 3:918.

⁶⁰ Koder, *Eparchenbuch*, 96–106 and 90–94, for the wholesale and the retail silk guilds.

⁶¹ See below, “Trade Names,” and Muthesius, *Studies*, study 16, sec. 9. Terms for purples in the Baggage Train account include the following:

- i. ὀξέα (τριβλαττίων καὶ διβλαττίων ὀξέων and ὀξέα διάφορα)
- ii. ψευδοξύς (ψευδοξέα)
- iii. βλαττία

Among the dye analyses on Byzantine silks carried out for the author in the early 1980s, it is interesting to note that one of the imperial Lion silks tested revealed a mixture of indigo and madder as constituents of its purple dye, and not murex dye. The silk appears to be one in a series of diplomatic gifts dispatched to the Latin West in conjunction with marriage negotiations.⁶² It is not unlikely that the Latins would have believed it to be a precious murex-dyed piece. Islamic dyers used a mixture of indigo and a lichen to obtain a similar imitation purple on another silk once mistaken for a Byzantine Lion fabric.⁶³ This appears to be a copy of a Byzantine imperial Lion silk sent as a diplomatic gift to the Islamic world.⁶⁴

Most recently, High Pressure Liquid Chromatography has been used to detect Byzantine dyes. Such tests have highlighted the use of madder and kermes as well as brazilwood dyes.⁶⁵ Murex purple itself occurs on a fine Byzantine griffin silk now at Sitten cathedral.⁶⁶ Murex purple has been detected also (by another process involving vatting, exposure to light, and reoxidation) on a tiny silk scrap taken from the Three Kings Shrine in the Aachen cathedral treasury.⁶⁷

A yellow dye was obtained from weld, and for greens, indigo and weld were mixed. A combination of weld and indigo is found on the Hungarian coronation mantle of Roger of Sicily in Vienna.⁶⁸ The Sicilian workshop that manufactured the silk employed both Islamic and Byzantine silk workers, and it is difficult to be certain whether Byzantine or Islamic craftsmen were the dyers of the piece. Further tests are necessary to establish whether or not the off-white surviving Byzantine silks are dyed. Some may have been totally undyed and only used natural silk yarn, which itself can range in color from off-white to golden yellow.

Guild Organization Related to Technical Aspects

It is impossible to decipher the guild regulations in the *Book of the Eparch* without reference to the actual stages of manufacture of silk yarns and subsequently of silk cloths.

iv. διπλαττία

v. τριβλάττιον

vi. ὀλόβηρος (ὀλόβηρα ἱαστὰ)

vii. ἱαστός

viii. ἀληθινὰ ἐνθάδια

See J. F. Haldon, *Constantine Porphyrogenitus: Three Treatises on Imperial Military Expeditions* (Vienna, 1990), references for the terms listed above, i–viii, are as follows: i. C243, 244, 251, 259; ii. C244–C245; iii. C300 and discussion on pages 205–7; iv. C173, C213, C235, C236, C240, C242, C251, C258, C504, C508; v. C251, C503, C732, C783; vi. C229; vii. C229, C230; viii. C291, 294, 301.

⁶² Muthesius, *Studies*, study 4, sec. 1, 64.

⁶³ *Ibid.*, 62–63.

⁶⁴ For such gifts, see M. Hamidullah, “Nouveaux documents sur les rapports de l’Europe avec l’Orient du Moyen Age,” *Arabica* 7 (1960): 281–300.

⁶⁵ Muthesius, *Byzantine Silk Weaving*, chap. 3.

⁶⁶ *Ibid.*, cat. nos. M573, M1106, M48, M825–M826, which are dyed with murex purple.

⁶⁷ *Ibid.*, cat. no. M304. Cf. H. Wagner, “The Cologne Fabric of the Three Kings Shrine,” *Bayer Reports* 47 (1982): 24–28.

⁶⁸ Muthesius, *Byzantine Silk Weaving*, cat. no. M100. Also, A. Timár-Balázsky and W. Roelofs, “Identification of Dyes on the Hungarian Coronation Mantle,” *Textile History* 18.1 (1987): 87–96.

Only through a close working knowledge of nonmechanized silk manufacture is it possible to understand the remarkable complexity of the organization of the nonimperial Byzantine silk industry.

The essential processes described in the *Book of the Eparch* relate to the work of the guilds of the Metaxopratai, the Katartarioi, and the Serikarioi.⁶⁹ The guild regulations demonstrate the specialist division of labor not only in raw silk retailing and in silk yarn preparation but also in silk weaving. Elsewhere I have analyzed the duties of the separate guilds in great detail. Here only a summary of important points can be given. Essentially the Metaxopratai, operating in a cartel, purchased but did not work the raw silk. They could only purchase the raw silk in the capital, and they paid tax on the purchase. They had to sell the worked raw silk in approved public markets, and they were not to pass it on illegally. Any cocoon silk would have had to be unraveled and reeled. Then it, as well as already reeled silk, would have required degumming (through boiling), and subsequently the silk would have needed to be wound into hanks. Some of the silk yarn would have been given extra twist in order for it to serve as strong warp thread. The silk from the center of cocoons was waste silk, and this would not have been reelable; instead it would have needed to be spun.

The Katartarioi (and also the Melathrarioi and, in addition, unnamed workers hired by the Metaxopratai) variously worked the raw silk into yarn, but of these only the Katartarioi and the Melathrarioi could purchase raw silk in a cartel with the Metaxopratai. The raw silk that arrived in cocoon form, according to my interpretation of the *Book of the Eparch*, would have been unraveled and reeled by the unnamed workers hired by the Metaxopratai. The Katartarioi were most likely the degummers of filament silk (i.e., those who boiled off the sericin gum from the unraveled and reeled silk). The Melathrarioi, who were poorer guild members, most probably were given the task of spinning the waste silk from the center of cocoons.

Within the workshops, too, there were many distinct skills: loom builders, pattern harness makers, weavers, draw-boys, dyers, and tailors all had to be accommodated. The *Book of the Eparch* described the tenth-century private silk-weaving workshops as a form of communal home to all these distinct, specialized workers. Thus the Serikarioi appear to have been an umbrella guild under which weavers, dyers, and tailors operated.⁷⁰

The Metaxopratai sold a limited weight of raw silk to private Byzantine citizens for manufacture of private clothing in private houses. The Katartarioi received their supplies of raw silk from the Metaxopratai (only as much as they could work), as did the Melathrarioi. The Serikarioi were also dependent on the Metaxopratai for raw silk. The Serikarioi did have the power to hire workers, but it seems unlikely that they bought anything other than unraveled and reeled silk from the Metaxopratai. Any extra workers mentioned in the *Book of the Eparch* were most likely to have been em-

⁶⁹ These guilds have been discussed in great detail in Muthesius, *Studies*, study 16, sec. 7 and 8, pp. 280–90; cf. study 7, pp. 124–25, with chart (pl. 56) that demonstrates the organization of the silk industry and the individual tasks of the different silk guilds.

⁷⁰ Koder, *Eparchenbuch*, chap. 8.

ployed to add extra twist to the yarn. The *Book of the Eparch* fails to reveal to whom the Katartarioi passed on their silk. Perhaps they returned it to the Metaxopratai, or possibly they sold the degummed silk to the Serikarioi. Surviving Byzantine silks all use degummed as opposed to gummed silk yarn.

It has been suggested that the Serikarioi were multiskilled craftsmen crossing all specialties from dressing to weaving, dyeing, and tailoring the silks.⁷¹ This is entirely impractical. Each skill is a lifetime occupation, and different abilities are involved in each task. In addition, some occupations are too dirty to be carried out in the vicinity of weaving itself. For instance, any dyeing operation would have to be kept well away from the weaving, which had to be carried out in immaculate conditions to avoid spoiling valuable cloths. As discussed above, the Serikarioi described in the *Book of the Eparch* must have been some type of factory owners, under whom all these tasks were carried out. In such a factory setting, it was possible for yarn to be plied or twisted, and for the different work of weavers, dyers, and tailors to take place in quite separate workshop spaces.

Trade Names

It is particularly in regulations defining forbidden goods or *kekolymena* that specific trade names for fine Byzantine silks occur. Important sources for these names include the *Book of the Eparch* and the Baggage Train account appended to the *Book of Ceremonies*, and some precious silks also appear in the wills of provincial magnates.⁷² In many cases, trade names have no parallels from which to draw meaning outside the silk trade. On the whole, they can be best interpreted with reference to practical processes involved in their manufacture.

Among the silks expressly forbidden for manufacture and export were the following: (*Book of the Eparch*, 4.1):⁷³ ὁξέων εἶτε καὶ πορφυραερίων μεγαλοζήλων; (ibid., 8.1–2):⁷⁴

⁷¹ D. Simon, "Die Byzantinische Seidenzünften," *BZ* 68 (1975): 23–46, esp. 34.

⁷² Muthesius, *Studies*, study 16, sec. 9, deals in detail with the terms discussed in the section here as well as with some related terms. In that study there is a review of the work on textile terms in Haldon, *Three Treatises*, and of earlier literature, including Koukoules and Reiske as well as of M. F. Hendy, *Studies in the Byzantine Monetary Economy c. 300–1450* (Cambridge, 1985), 304–15. Of the earlier literature, in particular note, see R. Guiland, "Sur quelques termes du Livre des Cérémonies de Constantin VII Porphyrogénète," *REG* 62 (1949): 328–33. For references to the *Book of the Eparch*, see Koder, *Eparchenbuch*, chaps. 4 and 8. For purple silks and precious cloths in the wills of provincial magnates, see P. Lemerle, *Cinq études sur le XIe siècle byzantin* (Paris, 1977): Le Testament d'Eustathios Boilas (April 1059), 15–63, esp. 23–24; La *Diataxis* de Michel Attaliat (March 1077), 67–112; Le *Typikon* de Grégoire Pakourianos (December 1083), 113ff. On the latter typikon more recently, see P. Gautier, "Le typikon du Sébaste Grégoire Pakourianos," *REB* 42 (1984): 5–145, note in particular the list of gifts on pp. 35–44 and gold and the purple imperial garments described on pp. 122–23. In addition, see L. Petit, "Typikon de Grégoire Pacourianos pour le monastère de Pétritzes (Bačkov) en Bulgarie," *VizVrem* 53 (1904): 24ff, esp. 53 for pearl embroidery and imperial items. Purple silks are described also in an inventory of the monastery of Patmos; C. Astruc, "L'inventaire (1200) du trésor et de la bibliothèque de Patmos," *TM* 8 (1981): 15–30, particularly 21–22.

⁷³ Muthesius, *Studies*, study 16, sec. 9, 291. Koder, *Eparchenbuch*, 90–91.

⁷⁴ Muthesius, *Studies*, study 16, sec. 9, 291–92, and Koder, *Eparchenbuch*, 102–3.

βλαττία κεκωλυμένα . . . ἡμιηλινοδίβλαττα καὶ πρασινοδίβλαττα μεγαλόζηλα . . . ἱμάτιον, εἴτε ἐξάπωνον εἴτε ὀκτάπωνον, πορφυράερον; (ibid., 8.1–2):⁷⁵ αἵματος for τριβλάττια or διβλάττια. Included in the silks to be declared to the eparch were the following: (*Book of the Eparch*, 8.1):⁷⁶ multicolored κατὰ περσικίων; (ibid., 8.1):⁷⁷ ἱμάτιον . . . δεκάπωνον καὶ δωδεκάπωνον, καὶ τοῦτο ἀληθινάερον καὶ λεπτόζηλον.

Terms applied to types of murex purples occur above as follows:⁷⁸ ὀξέων; πορφυραερίων; ἡμιηλινοδίβλαττα καὶ πρασινοδίβλαττα. The last two terms refer to peach and to green-purple hues. The διμοίρων ὀξέων have been interpreted to refer to red-purples.⁷⁹ The ἐξάπωνον εἴτε ὀκτάπωνον πορφυράερον are also types of purples.⁸⁰ The most likely explanation for the terms διβλάττια and τριβλάττια are twice and thrice dipped.⁸¹ The term -πωνον is not entirely clear. Elsewhere I have suggested that it pertained to the number of warp threads used, which governed the weight of the silk.⁸² Italian silks of the thirteenth to fourteenth century certainly were regulated in this manner.⁸³ To ensure the correct number of warps, they were accurately threaded in the correct proportions through a reed. If the term did refer to the warps, then it would also suggest the presence of a reed on the Byzantine loom. This is not unlikely, judging by the even spacing of warp threads in extant Byzantine silks by the tenth century.⁸⁴

The term μεγαλόζηλων is difficult to decipher.⁸⁵ Scholars have made various suggestions, regarding it as a reference to size or the value or degree of public demand for the silks.⁸⁶ However, these ideas have little practical use from the point of view of marketing. In fact, λεπτόζηλα (8.2) are distinguished from μεσοζήλων (8.2) and from μεγαλόζηλων (4.1), which points to silks of three densities: fine, medium, and coarse. The term -ζηλον most plausibly indicates the weight of the fabrics. The term is less likely to apply to size of design, particularly as small intricate designs in complex weaves perhaps with brocading, for instance, could easily demand higher prices than those with

⁷⁵ Muthesius, *Studies*, study 16, sec. 9, 291. Koder, *Eparchenbuch*, 104–5.

⁷⁶ Muthesius, *Studies*, study 16, sec. 9, 291–92. Koder, *Eparchenbuch*, 102–3.

⁷⁷ Muthesius, *Studies*, study 16, sec. 9, 291. Koder, *Eparchenbuch*, 104–5.

⁷⁸ Muthesius, *Studies*, study 16, sec. 9, 291, lines 1 and 4 in the list of silks totally forbidden for manufacture. Koder, *Eparchenbuch*, 90–91 and 102–3.

⁷⁹ Muthesius, *Studies*, study 16, sec. 9, line 1 of silks to be declared to the eparch; Koder, *Eparchenbuch*, 92–93.

⁸⁰ Muthesius, *Studies*, study 16, sec. 9, line 5 of silks totally forbidden for manufacture; Koder, *Eparchenbuch*, 102–3.

⁸¹ Muthesius, *Studies*, study 16, sec. 9, line 7 of silks totally forbidden for manufacture. Koder, *Eparchenbuch*, 104–5. Haldon, *Three Treatises*, 205–7, for C173; 221 for C235; 221–222 for C240–241. Hendy, *Studies*, 308.

⁸² Discussed in detail in Muthesius, *Studies*, study 16, at the beginning of sec. 9.

⁸³ D. and M. King, “Silk Weaves of Lucca in 1376,” *Opera Textilia Variorum Temporum: To Honour Agnes Geijer on Her Ninetieth Birthday, 26th October 1988* (Stockholm, 1988), 57–76.

⁸⁴ Muthesius, *Byzantine Silk Weaving*, cat. nos. M48, M53, M55, for example.

⁸⁵ Muthesius, *Studies*, study 16, sec. 9, 293, with comments on Haldon, *Three Treatises*, 218 for C226, and Hendy, *Studies*, 307–8.

⁸⁶ Muthesius, *Studies*, study 16, sec. 9, 295, with comments on Haldon, *Three Treatises*, 217 for C226, where the terms are discussed in relation to size, value, or degree of demand for the silks.

large-scale, simpler, nonbrocaded patterns. In any event, cost was not so much entirely dependent on scale as on whether the designs were symmetrical or asymmetrical. Mirror-image designs, such as hunters in medallions, could be woven using the pattern-making device in a straightforward manner for the first half of the design and then simply in reverse for the mirror-imaged remaining half of the pattern. Asymmetrical designs, on the other hand, required far more manipulation of the pattern-producing device, as there was no reversal of any part of the design entailed. The number of pattern cords required in the case of the symmetrical design was greatly reduced in comparison to that needed for its asymmetrical counterpart. A small-scale asymmetrical design could be far more costly to weave than a larger-scale symmetrical pattern. Predetermined price ranges according to pattern size, in these circumstances, would be very difficult to operate. Some of the terms used in the *Book of the Eparch* are also found in the Baggage Train account appended to the *Book of Ceremonies* (particularly terms associated with precious purples).⁸⁷ Similarly, in the Baggage Train account there are also other common problem terms. For instance, ἱμάτια δεκάλια and ἐξάλια occur in the Baggage Train account,⁸⁸ and they may be related to ἐξάπωλον and ὀκτάπωλον in the *Book of the Eparch*.⁸⁹

Most plausibly, the former terms also designated numbers and weights of warp threads employed, as discussed above in connection with the term -πῶλος.⁹⁰ Other explanations including the value of the silks, degree of gold ornament, and number of loom widths involved in tailoring garments have no technical basis.⁹¹ Silk values depended on too many variables. Gold fabrics could have been, and since earlier times indeed were, described with terms that included the word *gold*.⁹² Surviving silks demonstrate that silks were not woven in narrow loom widths and that very ample looms existed. It would have been unnecessary to tailor using narrow strips. Where silks with selvages have survived, it is possible to detect Byzantine looms up to more than 2 m wide.⁹³

The terms ἀρρήφια and ἐρραμένα, it has been suggested, relate to garments with or without sewn panels.⁹⁴ There is no evidence of such silks. It is more plausible to suggest that the terms mean sewn or unsewn and that they distinguish garments woven in the

⁸⁷ Discussed in Muthesius, *Byzantine Silk Weaving*, chap. 3, sec. 3.1, with analysis of G. Steigerwald, "Die antike Purpurfärberei nach dem Bericht Plinius des Älteren in seiner 'Naturalis historia,'" *Traditio* 42 (1986): 1–57, and idem, "Die Purpursorten im Preisedikt Diokletians vom Jahre 301," *ByzF* 15 (1990): 219–76.

⁸⁸ Muthesius, *Studies*, study 16, sec. 9, 294, with comment on Haldon, *Three Treatises*, 229–30 for C289–290, and Hendy, *Studies*, 310.

⁸⁹ Muthesius, *Studies*, study 16, sec. 9, line 5 of silks totally forbidden for manufacture. Koder, *Eparchenbuch*, 104–5. Cf. Haldon, *Three Treatises*, C289–C290, where the same term on the scale of both ten and twelve occurs.

⁹⁰ Muthesius, *Studies*, study 16, sec. 9, 292–93, 295.

⁹¹ Muthesius, *Studies*, study 16, sec. 9, 295, comments on Haldon, *Three Treatises*, 217–19 and C226.

⁹² Consider, for instance, χρυσοῦφάντους λόρους, discussed by I. Reiske, *Commentarii ad Constantinum Porphyrogenitum de Cerimoniis aulae Byzantinae* (Bonn, 1830), 128, A8.

⁹³ For Byzantine loom widths, see Muthesius, *Byzantine Silk Weaving*, chap. 2, n. 24. Some looms were between 2 and 3 m wide.

⁹⁴ Muthesius, *Studies*, study 16, sec. 9, discusses 296; Haldon, *Three Treatises*, 216 and C224.

piece from tailored garments; that is, they served to differentiate “woven to shape” items from tailored garments. The term διάσπρα probably meant two-tone white and referred to silks that relied on weave changes rather than on color contrasts for the formation of their designs (e.g., damasks and lampases).⁹⁵ A number of other terms have been analyzed without reference to technical factors, and the conclusions reached require scrutiny and modification.⁹⁶

Placing Value on the Silks

The *Book of the Eparch* regulated that all silks priced above 10 nomismata were to be declared to the eparch.⁹⁷ The *Russian Primary Chronicle* stated that “when the Russes enter the city, they shall not have the right to buy silk above the value of fifty bezants. Whoever purchases such silks shall exhibit them to the imperial officer, who will stamp and return them.”⁹⁸

The price of individual silks in large part depended on the cost of the raw materials involved. Byzantine raw silk was not traded openly, and it does not appear on price lists together with other raw silks. The average price of standard-quality raw silk traded in the Islamic Mediterranean in the tenth to eleventh century was 2.5 dinars per pound (5.5 dinars per kg). This sum was sufficient to maintain a family for one month.⁹⁹

On certain silks, up to half the cost of production might be accounted for by the use of precious dyes.¹⁰⁰ Purple dyes in particular could add to the costs heavily. From the time of the Edict of Diocletian, a special price range existed for different purples.¹⁰¹ In A.D. 300 the edict indicates that when raw silk cost 12,000 denarii per pound, murex-dyed raw silk fetched an astonishing 150,000 denarii.¹⁰² These prices can best be appreciated through comparison with others cited in the edict. For instance, a haircut cost 2 denarii. A plain silk weaver (and also a sewer cleaner) per day received 25 denarii plus maintenance. Clearly a distinction was made in costs to allow for payment of lesser and more greatly skilled weavers producing simpler and more complex weaves and designs.¹⁰³

Prices for middle Byzantine precious dyes, including murex purple silks, are not

⁹⁵ Muthesius, *Byzantine Silk Weaving*, cat. nos. M10, M11, M85–M87, for instance, for the silks. Explanations for the terms offered by Haldon, *Three Treatises*, are not acceptable on technical grounds and in light of the evidence of the surviving silks.

⁹⁶ For a discussion, see Muthesius, *Studies*, study 16, sec. 9, 296–97.

⁹⁷ *Book of the Eparch*, regulation 8.1. Koder, *Eparchenbuch*, 102–3.

⁹⁸ S. H. Cross and O. Sherbowitz-Wetzor, *The Russian Primary Chronicle* (Cambridge, Mass., 1953), 75.

⁹⁹ S. D. Goitein, *A Mediterranean Society* (London, 1967), 217, 223, and 359, app. B, point 2.

¹⁰⁰ *Ibid.*, 106–8, esp. 107.

¹⁰¹ For the edict, see, in English, T. Frank, *The Edict of Diocletian: An Economic Survey of Ancient Rome*, vol. 5 (London, 1940). More recently, in German, see S. Lauffer, *Diokletians Preisedikt* (Berlin, 1971); discussed in Muthesius, *Studies*, study 16, sec. 10, 301. At a time when raw silk cost 12,000 denarii a pound, murex blatta (best purple) dyed raw silk sold for the extraordinary price of 150,000 denarii a pound. Milesian purple cost 12,000 denarii a pound and bright Tyrian purple fetched 16,000 denarii a pound. Lighter blatta (best purple) sold at 32,000 denarii per pound.

¹⁰² Edict of Diocletian, 23.1.1 and 24.1.1. Muthesius, *Studies*, study 16, sec. 10.

¹⁰³ Edict of Diocletian, 20.1.10 and 20.1.11, for instance.

available, but an incident recorded in the Cairo Geniza documentation suggests that they were still exorbitant.¹⁰⁴ Cambridge University Library document Or 1081 J9 indicates the fate of a Jewish imperial dyeworks employee who inadvertently spoiled an imperial silk. His children were held for ransom while he (after being tortured almost to death) fled to Cairo to seek help from his Jewish coreligionists.¹⁰⁵

The Cairo Geniza documentation of the tenth to eleventh century provides specific details about the value of silks in the dowries of Jewish Mediterranean brides. These bridal trousseau inventories indicate the relatively high value placed upon Byzantine brocaded furnishings in particular. For instance, an undated document records one divan of unknown size, of Rumi brocade, and with two cushions and a back, at 50 dinars. Another document, dated 1156, lists a Rumi brocade divan at 40 dinars. Overall prices varied somewhat. For instance, whereas one Rumi brocade divan without back or cushions in 1140 cost 15 dinars, at the same date, another six-section divan of Rumi brocade was listed at 40 dinars. S. D. Goitein assigned the more expensive example to a rich household and the less expensive one to a lower middle-class household. A bridal diary of the same period (ca. 1140) included “a bed cover of Rumi brocade” at 10 dinars, a “sofa of Rumi brocade (six pieces)” at 40 dinars, and a “sofa of Rumi brocade (3 pieces)” at 15 dinars.¹⁰⁶

¹⁰⁴ Goitein, *Mediterranean Society*, 1:50 in sec. i, 2 and n. 54.

¹⁰⁵ Discussed in Muthesius, *Studies*, study 15, 247. There can be no doubt that the dyer was Jewish and that the document (Cambridge University Library Or. 1081 J9), datable to the 11th to 12th centuries, is important for indicating the presence of Jewish dyers in the imperial workshop. Already in the 10th century an alternative to the Christian oath of allegiance existed for the benefit of non-Christian silk guild members operating in Constantinople. See J. Starr, *The Jews of the Byzantine Empire, 641–1204* (Athens, 1939), 20, 21, 163ff, 221ff.

¹⁰⁶ Goitein, *Mediterranean Society*, 4:299–303 and 322–25.

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Part Two
The Sixth Century, Background

The Sixth-Century Economy

Cécile Morrisson and Jean-Pierre Sodini

The Byzantine Empire

The Byzantine Empire in the sixth century remained a power that encompassed the whole Mediterranean basin following Justinian's costly campaigns of reconquest. The barbarians nonetheless still held the Gallic territories and most of the Iberian peninsula, as well as Noricum and Pannonia. The Danubian *limes*, breached regularly from the fourth century on, ceased to offer any protection to the dioceses of Dacia and Thrace as of the 540s. The integration of Moesia II and of Scythia Minor into the *Quaestura Exercitus* represented Justinian's desperate attempt to protect the northern flank of Constantinople and the Balkan peninsula.

To the east, the empire extended as far as Georgia (Iberia); to the southeast, it included Martyropolis (Majafarqin) and Anastasioupolis (Dara), Nisibis having been left to the Sasanians by Jovian in 363 after Julian's disastrous eastern campaign. From the Euphrates to the Red Sea, *limitanei* established in the forts of the Via Nova Trajana and the Strata Diocletiana protected the provinces of Syria, Arabia, and Palestine, including the Sinai peninsula and the eastern shore of the Gulf of Aila.¹ Toward the middle of the sixth century, menaced by the Persians, Justinian assembled his troops along the northern frontier and entrusted the defense of the remaining area to the Ghassanid phylarchs, without undermining its security or its economy, despite the halt of fortification building and the departure of (ill-)paid troops.² The Nile was Byzantine as far south as Phile and the first cataract. Cyrenaica, a Byzantine territory that had been in decline since the halcyon days of Synesios, was revitalized by Justinian's western dream, and harbors, walls, and churches in particular underwent a great renewal (in the cities of Cyrene, Apollonias, Ptolemais, El Atrun, Berenice/Benghazi). To the north, in Crimea, Cherson was a powerful Byzantine enclave,³ and in the Balkans, the Danube continued to serve as a frontier.

This chapter was translated by Charles Dibble.

¹ S. T. Parker, *Romans and Saracens: A History of the Arabian Frontier* (Winona Lake, Ind., 1986); idem, *The Roman Frontier in Central Jordan: Interim Report on the Limes Arabicus Project* (Oxford, 1987).

² P. J. Casey, "Justinian, the Limitanei, and Arab-Byzantine Relations in the 6th Century," *JRA* 9 (1996): 214–22.

³ See A. Bortoli and M. Kazanski, "Medieval Kherson and Its Region," *EHB*.

The reconquest of the western shores of the Mediterranean constituted the Great Idea of Justinian's reign. The coasts of Tripolitania were quickly retaken, and cities such as Sabratha, Oea-Tripoli, and Leptis Magna restored. The ancient provinces of Byzacena, Africa Proconsularis, Numidia, and Mauritania Stifensis were wrested from the Vandals and made defensible once more through the efforts of Salomon the *patrikios*. The two coasts of the Strait of Gibraltar were Byzantine again as the result of the capture of Andalusian territories in 552.⁴ The Baleares, Sardinia, Corsica, and Sicily were quickly brought back into the Byzantine fold. Doing so proved more difficult, however, with respect to Italy and Dalmatia: Belisarios and, later, Narses were forced to fight toe-to-toe against Theodoric and his successors between 534 and 552.⁵

Throughout these territories milled Romanized and Christianized populations, who recognized, in theory at least, the supremacy of the Byzantine emperor, received titles and gifts from him, and furnished him with contingents of *foederati*: Visigoths and Franks to the west, Absiles and Alans on the eastern flank of the Black Sea, Ghassanid Arabs on the Transjordanian and Syrian *limes*. No serious or lasting invasion took place in the former *Pars Orientis* of the Roman Empire after the third quarter of the fourth century. The Roman network of land and sea routes remained passable to a great extent, and the measures of John of Cappadocia regarding the *cursus publicus* had in the short run no influence on the maintenance of the roads.⁶ This state of affairs, which favored economic activity and exchange, lasted until the mid-sixth century. Moreover, as we shall see, the trade networks exceeded—and did so by a great margin—areas that were governed by political or diplomatic accords: Byzantine trade extended as far as England to the west and to the east, by way of the Red Sea, as far as India.

The Population

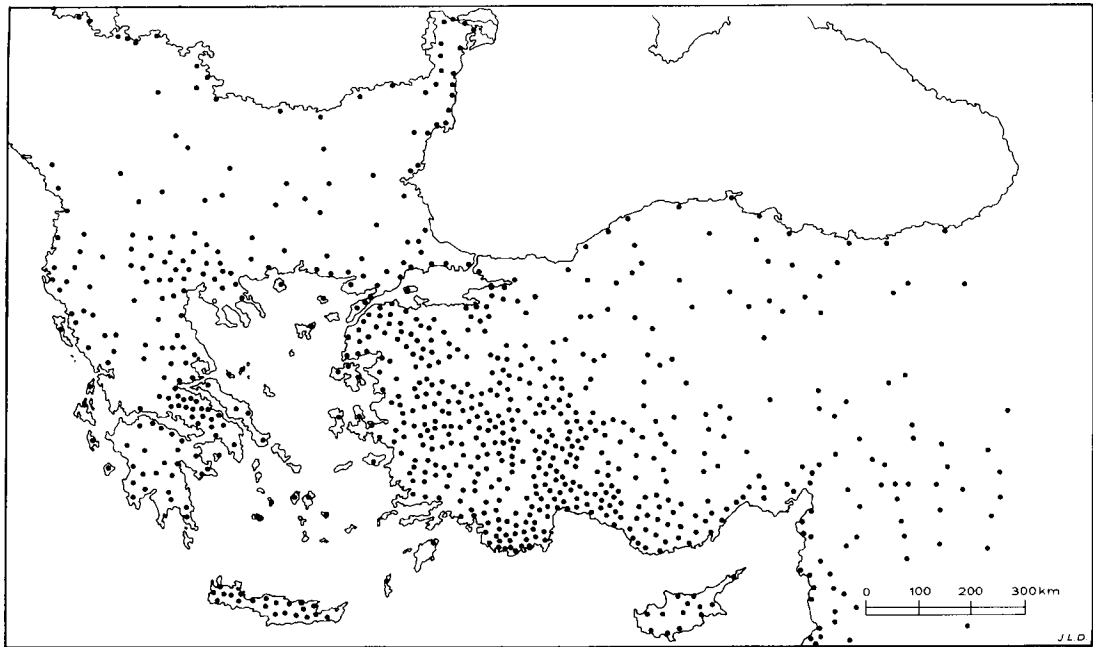
The Decline of Italian Cities, the Stability of African Cities, and the Varying Prosperity of Cities in the Pars Orientis (Fig. 1)

The long reconquest of Italy had led to irreparable damage. The population of Rome, which at the beginning of the fourth century still numbered 600,000 to 700,000 inhabitants according to Bernard Bavant (Jean Durliat puts the number at 800,000), fell to 200,000 (Bavant; Durliat: 350,000) after the raid of 410, and barely totaled 100,000 around the year 500. Immediately following Narses' reconquest of Rome, the population level tumbled to its demographic nadir: the city's population in the seventh century barely tipped 25,000 to 30,000 (Bavant; Durliat and Richard Krauthheimer: 90,000). Having lost its aristocracy and a great number of its artisans and merchants,

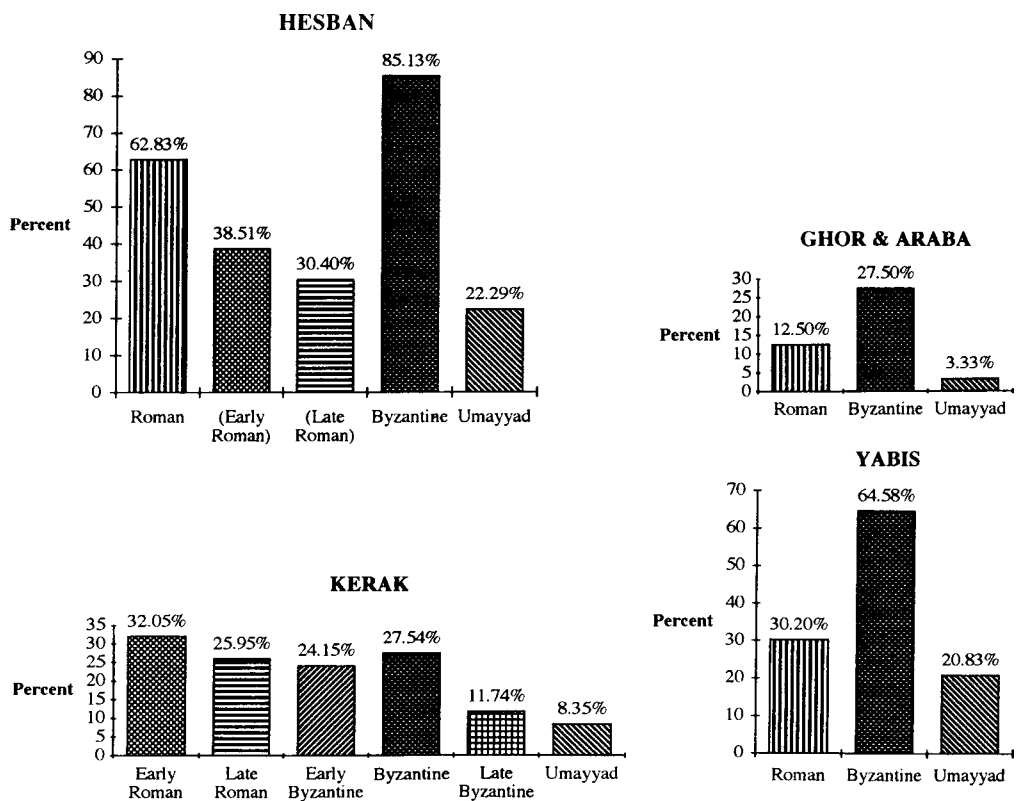
⁴ E. Stein, *Histoire du Bas-Empire*, 2 vols. (Paris, 1948), 2:560–64; R. Collins, *Early Medieval Spain* (London, 1983), 38; S. J. Keay, *Roman Spain* (Berkeley–London, 1988), 208.

⁵ Stein, *Bas-Empire*, 2:564–622; N. Christie and A. Rushworth, "Urban Fortification and Defensive Strategy in Fifth and Sixth Century Italy: The Case of Terracina," *JRA* 1 (1988): 73–88. The authors date these walls to 440 or thereabouts, rather than 535 to 553.

⁶ See A. Avramea, "Land and Sea Communications, Fourth–Fifteenth Centuries," *EHb* 57.



1. The Balkans and Anatolia: distribution of cities, ca. 450 (after M. Hendy, *Studies in the Byzantine Monetary Economy, c. 300–1450* [Cambridge, 1985], 71, map 14)



2. Relative number of occupied sites in Jordan according to recent surveys based on ceramics (after A. Walmsley, "Byzantine Palestine and Arabia," in *Towns in Transition*, ed. N. Christie and S. T. Loseby [Aldershot, 1996], 152)

Rome became home to country folk and assumed a decidedly rustic character.⁷ All the Italian cities were affected, with the possible exception of Ravenna, which had not been captured and whose evolution, while similar, was differentiated to some extent by virtue of its function as a regional capital and the importance of its ties to the East. The cities of Liguria maintained contacts with Constantinople, as they did with Rome. As of 568, however, the Lombard invasion began to tear Italy apart once again.⁸

To some extent, Africa got a better start. The reconquest was effected rapidly, without harming the territory, and the Byzantine administration took steps to invest in it. An entire program of fortification was completed with vigor and skill. Carthage was the object of privileged treatment. The Wall of Theodosios was rebuilt and its moats relaid. The great columned basilica at Byrsa, built by Antoninus Pius, was reconstructed as a fortified monastery—a sign of the times. The Antonine baths, which had lain decrepit during the fifth century, were rebuilt in the sixth. A portico graced the circular harbor and sheltered artisans who specialized in textile work (the remains of what is thought to have been the imperial *gynaecium* have been found).⁹ Certain houses seem to have been rebuilt during this period. The process of transformation took place in other cities as well. At Tingad, at Djemila (Cuicul), and at Bulla Regia, new centers were created, albeit on a less monumental scale. Baths were maintained at Setif and, reconstructed in more modest form, lasted until the year 600. But these efforts came to a sudden end. Private residences and shops sprang up in a number of fora. Agricultural presses began to appear within towns.¹⁰ A progressive slowdown in activity and in exchange, accompanied by demographic stagnation, developed during the seventh century.

Cities inside Thrace and Moesia fell into decline beginning in the second half of the fifth century, in spite of imperial support. No more than a few hundred inhabitants populated Caričin Grad/Justiniana Prima, Illyricum's aborted capital. The early Byzantine surrounding wall at Nikopolis ad Istrum left little room for inhabitants, who

⁷ R. Krautheimer, *Rome: Profile of a City, 312–1308* (Princeton, N.J., 1980); B. Bavant, “Cadre de vie et habitat urbain en Italie centrale byzantine (VIe–VIIIe s.),” *MélRome Moyen-Age* 101 (1989): 465–532; J. Durliat, *De la ville antique à la ville byzantine: Le problème des subsistances* (Rome, 1990), 110–17, 159–60; R. Meneghini and R. Santangeli Valenzani, “Episode di trasformazione del paesaggio urbano nella Roma altomedievale,” *Archeologie medievale* 23 (1996): 53–99.

⁸ T. S. Brown and N. Christie, “Was There a Byzantine Model of Settlement in Italy?” *MélRome Moyen-Age* 101 (1989): 377–99; S. Gelichi, “Ravenna ascesa e declino di una capitale,” in G. Ripoll and J. M. Gurt, eds., *Sedes regiae (ann. 400–800)* (Barcelona, 2000), 109–34; G. P. Brogiolo, “Capitali e residenze regie nell'Italia longobarda,” in *Sedes regiae*, 135–62; G. P. Brogiolo and S. Gelichi, *La città nell'alto medioevo italiano* (Rome, 1998).

⁹ H. R. Hurst, *Excavations at Carthage: The British Mission*, vol. 2.1, *The Circular Harbour, North Site* (Oxford, 1994), 53–98.

¹⁰ S. Roskams, “Urban Transition in North Africa: Roman and Medieval Towns of the Maghreb,” in *Towns in Transition: Urban Evolution in Late Antiquity and the Early Middle Ages*, ed. N. Christie and S. T. Loseby (Aldershot, 1996), 159–83; F. Ghedini, “L'Africa Pronconsulare,” in *Storia di Roma*, ed. A. Carandini, L. Cracco Ruggini, and A. Giardina, vol. 3.2 (Turin, 1993), 309–26; H. Hurst, “Cartagine, la nuova Alessandria,” *ibid.*, 327–38; L. Bacchielli, “La Tripolitania,” *ibid.*, 339–50; E. Fentress, “La Numidia,” *ibid.*, 351–62.

may have occupied the outskirts of the city.¹¹ It was the cities on the shore of the Black Sea that endured, such as Istria (whose perimeter narrowed, a fact that does not necessarily imply a drop in the population) and Tomis; both maintained a very active trade with Asia Minor. Cherson seems to have witnessed an expansion at the end of the sixth century and the beginning of the seventh.¹²

Within Asia Minor and Syria-Palestine—the more populated and dynamic regions of the empire—cities continued to prosper, at least until the middle of the sixth century. The population of Constantinople at the start of the sixth century numbered 400,000 (or slightly more).¹³ We may reckon that of Antioch at approximately 200,000 prior to the earthquake of 526 (which killed 250,000 according to Malalas, 300,000 according to Prokopios), a second quake in 528, and the deportation of its inhabitants by the Persians in 540.¹⁴ Apameia supported a population of around 100,000, if not somewhat more. Adarmanes, at the sack of the city in 573, with his 6,000 armored horsemen and Lakhmid Arab auxiliary forces, withdrew with 200,000 captives.¹⁵ We may estimate the population of Alexandria at no fewer than 100,000; so too for Thessalonike. The population of Ephesos is not ascertainable, but must have been lower by only a small margin.¹⁶ Caesarea in Palestine, Jerusalem, and Sardis¹⁷ would have had between 50,000 and 100,000 inhabitants. Gerasa, despite its fifteen churches, may have suffered a demographic decline relative to the Roman period. A provincial capital such as Nikopolis must have numbered from 30,000 to 35,000, as did Gortyna and, possibly, Beisan-Scythopolis, where excavators posit a population of 30,000 to 40,000; the latter city witnessed a significant program to rebuild public infrastructures, while private houses and shops were restored.¹⁸ One may estimate the population of the city of Hermopolis

¹¹ A. Poulter, "The Use and Abuse of Urbanism in the Danubian Provinces during the Later Roman Empire," in *The City in Late Antiquity*, ed. J. Rich (London–New York, 1992), 99–135; idem, *Nicopolis ad Istrum, A Roman, Late Roman, and Early Byzantine City: Excavations, 1985–1992* (London, 1995), 43–47; idem, "The Roman to Byzantine Transition in the Balkans: Preliminary Results on Nicopolis and Its Hinterland," *JRA* 13 (2000): 346–58.

¹² See Bortoli and Kazanski, "Kherson."

¹³ C. Mango, *Le développement urbain de Constantinople, IVe–VIIe siècles* (Paris, 1985), 51; D. Jacoby, "La population de Constantinople à l'époque byzantine: Un problème de démographie urbaine," *Byzantion* 31 (1961): 81–109 (= *Société et démographie à Byzance et en Romanie latine* [London, 1975], art. 1).

¹⁴ J. H. W. G. Liebeschuetz, *Antioch: City and Imperial Administration in the Later Roman Empire* (Oxford, 1972), 92–100.

¹⁵ J.-C. Balty, "Apamée au VIe siècle: Témoignages archéologiques de la richesse d'une ville," in *Hommes et richesses dans l'Empire byzantin*, 2 vols. (Paris, 1989–91), 1:81–96.

¹⁶ C. Foss, *Ephesus after Antiquity: A Late Antique, Byzantine and Turkish City* (Cambridge, 1979), 96–97.

¹⁷ J. Russell, "Transformations in Early Byzantine Urban Life: The Contribution and Limitations of Archaeological Evidence," *The 17th International Byzantine Congress, Major Papers* (New Rochelle, N.Y., 1986), 139: at least 100,000 for Sardis. Russell refers to G. M. A. Hanfmann and J. C. Waldbaum, *A Survey of Sardis and the Major Monuments outside the City Walls* (Cambridge, Mass., 1975), 6, 22–23.

¹⁸ Y. Tsafir and G. Foerster, "From Scythopolis to Baysan: Changing Concepts of Urbanism," in *The Byzantine and Early Islamic Near East*, vol. 2, *Land Use and Settlement Patterns*, ed. G. R. D. King and A. Cameron (Princeton, N.J., 1994), 106.

at between 25,000 and 50,000 inhabitants and that of a provincial Egyptian metropolis of 80 ha² at around 16,000.¹⁹

As a general rule, the coastal cities seem to have been densely populated through the sixth century.²⁰ Cyprus apparently had a sizable population up to the Arab invasion of 648–649. An inscription at Soloi mentions the capture of 120,000 individuals, although we cannot be certain whether these constitute the inhabitants of a single city on the island or, more plausibly, of the island as a whole.²¹ The same held true for the cities of the continental province of Arabia and their expansion into Palestine III as far as Aila-Aqaba; these were extremely prosperous during the sixth and seventh centuries.²² The cities were unequally distributed, despite the efforts of the emperors to make their numbers grow in the less populous regions in order to foster greater administrative and fiscal efficiency. City (*polis*) and countryside (*chora*) were mutually complementary in the development of the territory of the city. Many landowners lived in town, in particular the *possessores*,²³ who administered the city together with the bishop and the representative of the provincial administration. Agricultural production was thus a fundamental element of urban prosperity.

The Concentration of Rural Sites in the Empire

Surveys conducted in diverse regions (Boeotia, the Argolid, southwestern Turkey, Cyprus, Palestine, and Transjordan [Fig. 2]) reveal a highly advanced level of development. In the Argolid, around the city of Hermione, sites clearly proliferated around the fourth century A.D. and nearly matched the density of the fourth century B.C.²⁴ New sites sprang up on hillsides and in the high valleys—land that was highly conducive to

¹⁹ R. S. Bagnall, *Egypt in Late Antiquity* (Princeton, N.J., 1993), 53.

²⁰ One of the first to have argued this position was D. A. Zakythinos ("La grande brèche dans la tradition historique de l'hellénisme du septième au neuvième siècle," *Χαριστήριον εις Ἀναστάσιον Κ. Ὁρλάνδον* [Athens, 1966], 3:300–327), focusing particularly on the Aegean coasts of Greece. The same holds true, however (as we indicate in the course of this study) for the shores of the Black Sea and other sectors of the Mediterranean. It appears that in the West, the decline of the ports was not as irreversible as has been thought—at least with respect to Tarraco (S. Keay, "Tarraco in Late Antiquity," in Christie and Loseby, *Towns in Transition* [as above, note 10], 18–44) and Marseille (S. T. Loseby, "Marseille: A Late Antique Success Story?" *JRS* 82 [1992]: 165–85).

²¹ J. des Gagniers and Tran Tam Tinh, *Soloi: Dix campagnes de fouilles (1964–1974)* (Sainte-Foy, 1985), 115–26; D. Feissel, "Bulletin épigraphique," *REG* 100 (1987): 380–81.

²² R. Schick, *The Christian Communities of Palestine from Byzantine to Islamic Rule: A Historical and Archaeological Study* (Princeton, N.J., 1995); idem, "Jordan on the Eve of the Muslim Conquest, A.D. 603–634," in *La Syrie de Byzance à l'Islam, VIIe–VIIIe siècles*, ed. P. Canivet and J.-P. Rey-Coquais (Damascus, 1992), 107–19; Z. T. Fiema, "Economics, Administration, and Demography of Late Roman and Byzantine Southern Transjordan" (Ph.D. diss., University of Utah, 1991); A. Walmsley, "Byzantine Palestine and Arabia: Urban Prosperity in Late Antiquity," in Christie and Loseby, *Towns in Transition* (as above, note 10), 126–58.

²³ For the meaning of this term, see J. H. W. G. Liebeschuetz, "Civic Finance in the Byzantine Period," *BZ* 89 (1996): 396–97.

²⁴ M. H. Jameson, C. N. Runnels, and T. H. Van Andel, *A Greek Countryside: The Southern Argolid from Prehistory to the Present Day* (Stanford, Calif., 1994).

the cultivation of olives and in many cases had been unused prior to this period. By contrast, a slight setback occurred in the region of Sparta, whereas certain urban centers rose in importance.²⁵

In Lycia the surveys conducted by R. Martin Harrison in the central part of the region and by Frank Kolb around Kyaneai highlight the development of villages and farms, as well as of farmed terraces, thus confirming the information provided in the *Life of St. Nicholas of Sion*.²⁶ In Cilicia, wealthy villages composed of spacious houses endowed with agricultural presses, scattered somewhat haphazardly around churches, began to develop as of the fourth century in a hinterland that was well connected to the coast.²⁷ In northern Syria, several hundred villages—the successors to estates—arose between 300 and 550 in the limestone massif at the margins of the vast agricultural area.²⁸ The basaltic region to the northeast of Hama, at the edge of the steppe, also witnessed a strong expansion in the number of villages and small cities during the early Byzantine era.²⁹

The growth of early Byzantine Cyprus was expressed in a widespread proliferation of late Roman sites. Even in a region as marginal as Akamas, situated at the western edge of the island, Hagios Kononas expanded from the fifth century until approximately the middle of the sixth century.³⁰ Elsewhere on the island, at Kalavasos-Kopetra and Maroni-Petrera, the expansion flourished into the seventh century,³¹ and a survey of the region of Amathos confirms the fact.³² A number of surveys of Transjordan indicate a relatively significant density, in some cases exceptional, of early Byzantine sites. Despite the margins of error inherent even in systematic studies, since they are limited to the top strata, taken as a whole these surveys provide evidence of an unusual population density in the countryside of the eastern diocese and a portion of the Aegean coast. The cause was most probably a strong demographic pressure,³³ but sudden population movements may also have been a factor.

²⁵ W. Cavanagh et al., *The Laconia Survey, Continuity and Change in a Greek Rural Landscape*, vol. 2 (London, 1996).

²⁶ C. Foss, "The Lycian Coast in the Byzantine Age," *DOP* 48 (1994): 1–52.

²⁷ *RBK* 4:182–356, s.v. "Kommagene-Kilikien-Isaurien."

²⁸ G. Tate, *Les campagnes de la Syrie du Nord, du II^e au VII^e siècle: Un exemple d'expansion démographique et économique dans les campagnes à la fin de l'Antiquité* (Paris, 1992).

²⁹ J. Lassus, *Inventaire archéologique de la région au nord-est de Hama* (Damascus, 1935).

³⁰ J. Fejfer, ed., *Ancient Akamas*, vol. 1, *Settlement and Environment* (Aarhus, 1995); summary by M. Rautmann in *JRA* 9 (1996): 466–68.

³¹ M. L. Rautman and M. C. McClellan, "Excavations at Late Roman Kopetra (Cyprus)," *JRA* 5 (1992): 265–71; S. Manning et al., "Maroni Valley Archaeological Survey Project: Preliminary Report on the 1992–1993 Seasons," *RDAC* (1994): 356–67.

³² P. Aupert, ed., *Guide d'Amathonte* (Athens, 1996).

³³ For Palestine, see the conclusions of Y. Tsafrir, "Some Notes on the Settlement and Demography of Palestine in the Byzantine Period: The Archaeological Evidence," in *Retrieving the Past: Essays on Archaeological Research and Methodology in Honor of Gus W. Van Beck*, ed. J. D. Seger (Winona Lake, Ind., 1996), 269–83.

The Rural Habitat: The Growth of Villages, the Persistence of Farmsteads, and the Decline of Villas

In the east, as in Byzantine North Africa, there is little evidence of the system of the villa in which large landowners resided, at least on a part-time basis, after the fourth century, as distinct from Gallia Belgica, England, Aquitaine, Spain, and southern Italy (for example, the villa of San Giovanni di Ruoti in Puglia³⁴ and villas in Sicily). The western villas were most often abandoned in the course of the fifth century, giving rise in some cases to villages clustered around a church. The same holds true for the dioceses of Pannonia and Dacia, in which villas that lasted beyond the fifth century are rare (Fig. 3). By contrast, a number of fortified sites began to appear, often endowed with a church.³⁵ Villas were few and far between in the diocese of Macedonia; there is evidence of several at the height of the sixth century.³⁶ In Greece, a good number—"neither urban nor rural"—have been identified in the environs of Corinth, at the outskirts of fertile land and in contact with the city.³⁷ In the Argolid (Akra Sophia, a site near Halieis) and in Messenia near Pylos, several villas that remained active into the sixth century have been identified.³⁸

In Asia Minor, except for several cases cited in the sources (notably the texts of St. Gregory of Nazianzos regarding his family's villa in Cappadocia³⁹) or located around cities such as Ankyra, few examples are known. In Osrhoene at Sarrin, the atrium of what seems to have been a rural residence has been identified.⁴⁰ In the provinces of Phoenicia and Palestine I, several large suburban villas have been discovered on the seacoast

³⁴ A. M. Small, "Gli edifici del periodo tardoantico a San Giovanni," in *Lo Scavo di S. Giovanni di Ruoti ed il periodo tardoantico in Basilicata* ed. M. Gualtieri, M. Salvatore, and A. M. Small (Bari, 1983), 21–37.

³⁵ E. Thomas, *Römische Villen in Pannonien: Beiträge zur pannonischen Siedlungsgeschichte* (Budapest, 1964); J. Henning, *Südosteuropa zwischen Antike und Mittelalter: Archäologische Beiträge zur Landwirtschaft des 1. Jahrtausends u. Z.* (Berlin, 1987); M. Jeremić, "Balajnac, agglomération protobyzantine fortifiée," *Antiquité tardive* 3 (1995): 193–207; M. Jeremić and M. Milinković, "Die byzantinische Festung von Bregovina (Südserbien)," *ibid.*, 209–225; M. Milinković, "Die Gradina auf dem Jelica-Gebirge und die frühbyzantinischen Befestigungen in der Umgebung von Čačak, Westserbien," *ibid.*, 227–250; A. G. Poulter, "Town and Country in Moesia Inferior," *Ancient Bulgaria: Papers Presented to the International Symposium on the Ancient History and Archaeology of Bulgaria, University of Nottingham, 1981* (Nottingham, 1983), 74–118.

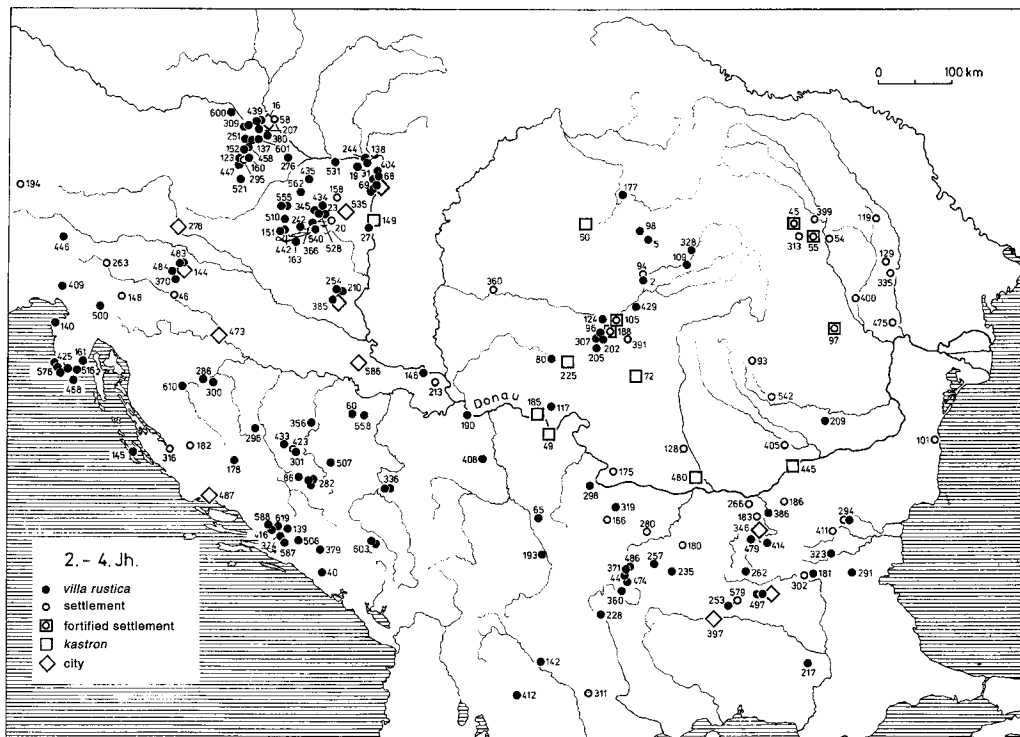
³⁶ S. Djurić, "Mosaic of Philosophers in an Early Byzantine Villa at Nerodimlje," *VI Coloquio Internacional sobre mosaico Antiguo, Palencia-Merida, Octubre 1990* (Guadalajara, 1994), 123–34.

³⁷ R. M. Rothaus, "Urban Space, Agricultural Space and Villas in Late Roman Corinth," in *Structures rurales et sociétés antiques*, ed. P. N. Doukellis and L. G. Mendoni (Paris, 1994) 391–96.

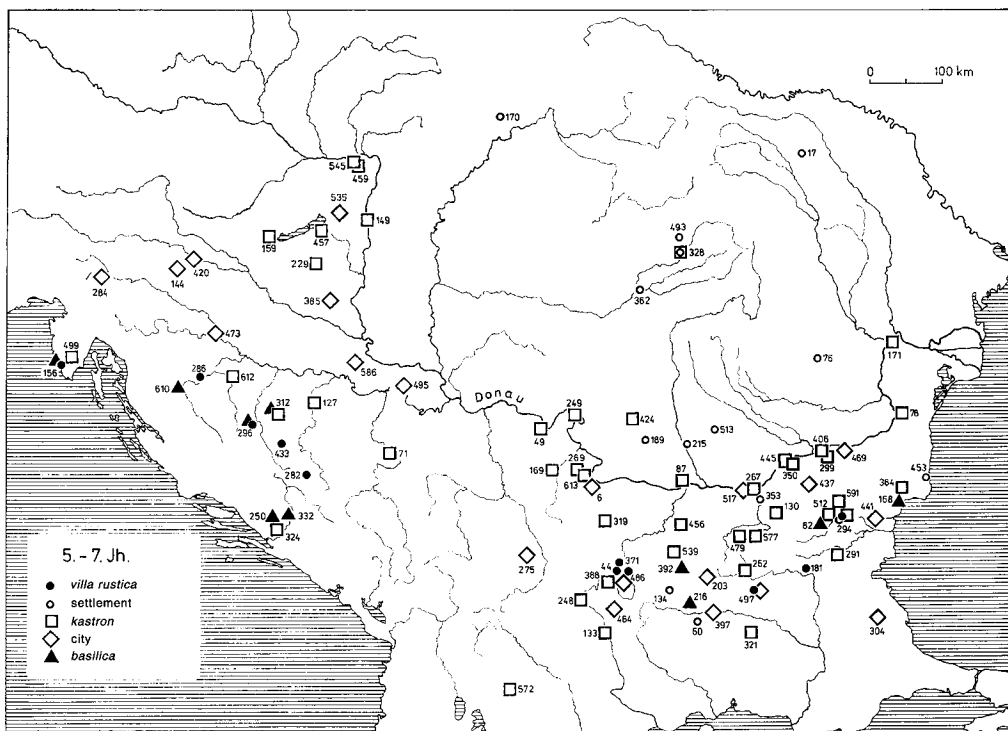
³⁸ T. E. Gregory, "An Early Byzantine Complex at Akra Sophia Near Corinth," *Hesperia* 54 (1985): 411–28; for Messenia, information provided by S. Gerstel (report in *Hesperia* 66 [1997], 469–82). Other examples in C. K. Kosso, "Public Policy and Agricultural Practice: Archaeological and Literary Study of Ancient Greece" (Ph.D. diss., University of Illinois, Chicago, 1993).

³⁹ J. Rossiter, "Roman Villas of the Greek East and the Villa in Gregory of Nyssa Ep. 20," *JRA* 2 (1989): 101–10.

⁴⁰ J. Balty, *La mosaïque de Sarrin (Osrhoène)* (Paris, 1990).

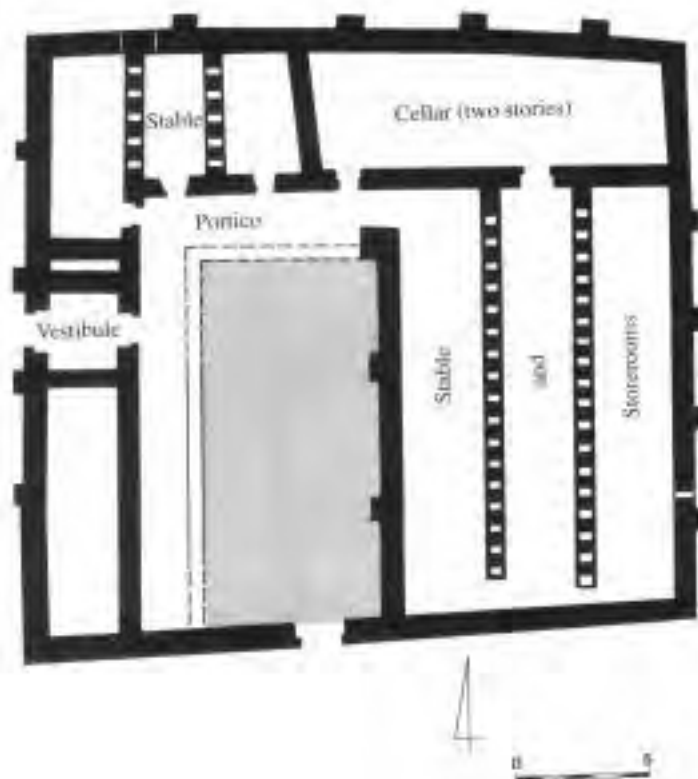
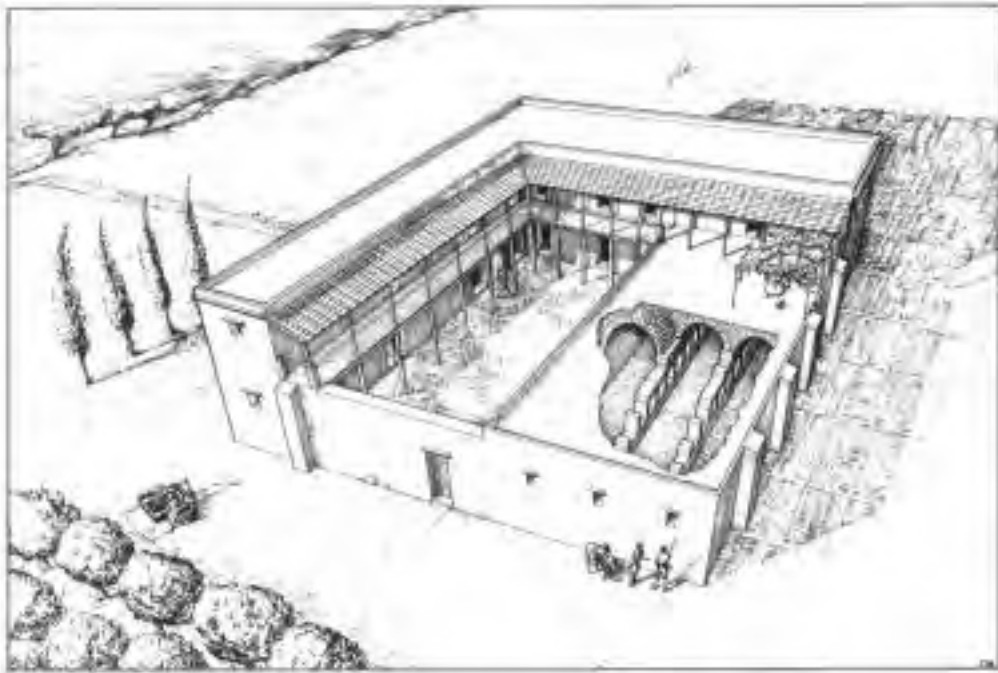


(a)



(b)

3. Distribution of habitat (by type) in the Balkans: (a) second–fourth centuries; (b) fifth–seventh centuries (after J. Henning, *Südosteuropa zwischen Antike und Mittelalter*, *Archäologische Beiträge zur Landwirtschaft des 1. Jahrtausends u. Z.* [Berlin, 1987], 23, fig. 1, and 37, fig. 11)



4. Farm in Ramat Hanadiv (Mount Carmel, Palestine I), sixth–seventh centuries (after Y. Hirschfeld, *The Palestinian Dwelling in the Roman-Byzantine Period* [Jerusalem, 1995], 83, fig. 59)

(at Jenah and Awzai, another one near Caesarea), but there were no rural villas in the strict sense. At Ascalon, the complex that has been found more resembles an enterprise directed toward agricultural production than the residence of a landowner.⁴¹

Village and farmstead were thus the two common forms of rural land exploitation; one might predominate over the other, or they might balance each other. Early Byzantine villages have been identified and studied to some extent in regions where the topography and climate protected them over a long period from reoccupation and destruction—in the high Lycian valleys, the mountainous foothills of Cilicia, the limestone massif, the basalt hills of Hauran, the Golan, or the Negev desert.⁴² In these regions, such forms of habitation were for the most part the rule. They increased considerably between the fourth and the sixth century. The development of certain villages of the limestone massif in northern Syria can be deduced either through great estates such as those at Bammuqqa, Benebil, and Qirbizze, or on the basis of preexisting communities (for example, at Brad, where the hypothesis of the village's origins in a large estate should nonetheless not be ruled out).

Sometimes the village occupied a site in which no prior traces are discernible without recourse to excavations. Naturally, there are differentiations within this region: the southern chain of the limestone massif has yielded larger and more structured houses with a more elaborate system of access in the Djebel Zawiyte than in the Djebel Barisha and the Djebel Sem'an; in the latter areas, the topography is relatively uneven, with more limited arable land that needs to be carefully cleared of rocks. These areas must have differed in agricultural production and certainly in yield. The outward aspect of villages changes even within a single mountain chain, a function of altitude or of accessibility.⁴³ These villages developed toward the end of the fifth century and the beginning of the sixth in the southern Hauran (even though certain "Roman" villages, such as Jimarín and Burd, continued to exist during the early Byzantine period⁴⁴), and in the Negev, where they might have been newly founded or reworkings of Nabatean sites. They are numerous in Egypt, where they are estimated to have numbered between 2,000 and 2,500.⁴⁵

The farmstead, nonexistent in the limestone massif, and rare in the Hauran and the Golan Heights, was important in Judea, on the seacoast between Dor and Gaza (Fig. 4), in the hills of Samaria, and in the Negev.⁴⁶ Village and farmstead coexisted in equal

⁴¹ Information regarding Ascalon communicated by Y. Hirschfeld, whom we thank.

⁴² P.-L. Gatier, "Villages du Proche-Orient protobyzantin (4^{ème}–7^{ème} siècle): Etude régionale," in *Land Use and Settlement Patterns* (as above, note 18), 17–48.

⁴³ G. Tchalenko, *Villages antiques de la Syrie du Nord. Le massif du Belas à l'époque romaine*, 3 vols. (Paris, 1953–58); Tate, *Campagnes*.

⁴⁴ F. Villeneuve, "L'économie rurale et la vie des campagnes dans le Hauran antique (I^{er} s. av. J.-C.–VII^e s. ap. J.-C.): Une approche," in *Hauran I*, ed. J.-M. Dentzer, 2 vols. (Paris, 1985), 1:63–136; H. I. MacAdam, "Settlements and Settlement Patterns in Northern and Central Jordan, ca. 550–ca. 570," in *Land Use and Settlement Patterns* (as above, note 18), 49–94; R. Schick, "The Settlement Pattern of Southern Jordan: The Nature of Evidence," *ibid.*, 133–54.

⁴⁵ Bagnall, *Egypt*, 110.

⁴⁶ Y. Hirschfeld, *The Palestinian Dwelling in the Roman-Byzantine Period* (Jerusalem, 1995).

proportion in Cilicia.⁴⁷ Excavations undertaken in various *wadis* of Tripolitania have also revealed the existence of fortified farms between the fourth and the sixth century—the *qsour*, which seem to have been part of the dependent networks of large landowners, rather than independent entities.⁴⁸ In Tunisia, in the region of Cillium-Thelepte, farms were also abundant and were integrated into networks of villas and cities. This pattern, however, is obscure and disputed; it is not certain, moreover, whether it lasted into the sixth century, after the Byzantine reconquest (533–536), in this specific region at least.⁴⁹

A New Level: The Secondary City, or Town

Many villages hardly differed from small cities, and the transition from one to the other was imperceptible. In the urban hierarchy there thus appears an intermediary level between city and village: large towns (*komai*, *metrokomiai*, *komopoleis*), on which Gilbert Dagron has focused and which call to mind the “secondary centers” that were developing in the West during the same period.⁵⁰ The *emporía*, which were not necessarily located on the sea, and which are amply attested in Thrace, Bithynia, and Moesia during the late empire, fall under this category of urban habitation.⁵¹

A famous passage in Libanios’ *Antiochikos* clearly explains the function of the *metrokomiai* of Antiochene.⁵² As a result of artisanal production and small-scale trade, they had markets, in which peasants could acquire requisite goods and tools without having to go to the city. What seem to have been shops have been found in a number of these towns,⁵³ and we find references to textile makers,⁵⁴ blacksmiths,⁵⁵ goldworkers,⁵⁶

⁴⁷ In addition to villages composed of several sizeable houses, such as Karakabakli, Isikkale, and Sinekkale (*RBK* 4:182–356, s.v. “Kommagene/Kilikien/Isaurien”), fortified farms have been identified (in Delikkale, Gökbürç, Cettepe, Keslik) (*ibid.*) and a large estate, possibly a farmstead, possibly part of a village at Domuztepe (J. J. Rossiter and J. Freed, “Canadian-Turkish Excavations at Domuztepe, Cilicia, 1989,” *Echos du monde classique/Classical Views* 35, n. s., 10 [1991]: 145–74).

⁴⁸ G. W. W. Barker et al., “Unesco Libyan Valleys Survey XXIII: The 1989 Season,” *Libyan Studies* 22 (1991): 31–60; D. A. Welsby, “ULVS XXV: The *Gsur* and Associated Settlements in the Wadi Umm el Kharab. An Architectural Survey,” *Libyan Studies* 23 (1992): 73–99.

⁴⁹ R. Bruce Hitchner, “The Organization of Rural Settlement in the Cillium-Thelepte Region (Kasserine, Central Tunisia),” *L’Africa Romana*, 6.1. (Sassari, 1989): 387–402.

⁵⁰ G. Dagron, “Entre village et cité: La bourgade rurale des IV^e–VII^e siècles en Orient,” *Koinonia* 3 (1979): 29–52 (repr. in *idem*, *La romanité chrétienne en Orient: Héritages et mutations* (London, 1984), art. 7.

⁵¹ Regarding these institutions, see J. and L. Robert, “Bulletin épigraphique,” *REG* 92 (1979): no. 548.

⁵² Libanios, *Or.* 11.230, in A.-J. Festugière, *Antioche païenne et chrétienne: Libanios, Chrysostome et les moines de Syrie* (Paris, 1959), 29–30.

⁵³ Such at least seems the likely function of rooms opening onto the street and onto the other rooms of the house: Hirschfeld, *Dwellings*, *passim*.

⁵⁴ Alexandros *agnapharios*, surnamed Sakkas, originally from the village of Kadia, who exercised his trade at the *emporion* of Strobilos (“Bulletin épigraphique,” *REG* 92 [1979]: no. 548).

⁵⁵ *Vie de Théodore de Sykéon*, ed. A.-J. Festugière, 2 vols. (Brussels, 1970), 1: chap. 27, p. 25.

⁵⁶ *Nessana Papyri* 30.3; 79.42; 90.60, ed. C. Kraemer, *Non-Literary Papyri*, Excavations at Nessana 3 (Princeton, N.J., 1958), 92, 230, 272 [hereafter *PNess*]; for another (*chrysochos* [sic]) at Luzit, near Beth

entrepreneurs, stone carvers, and carpenters.⁵⁷ The marble workers of the island of Proconnesos were dependent on an *emporion* tied to Kyzikos.⁵⁸ They had physicians⁵⁹ and, undoubtedly, schoolmasters and lawyers.⁶⁰ These represented “satellite towns,” to use Dagron’s phrase, in which fairs (*panegyreis*, *nundinae*) were held (as they were at Imma [Yenni Sehir]), and in which merchants circulated; one such merchant purchased the fair’s entire stock of nuts.⁶¹ There is textual evidence for these towns, which might bring together individuals of the same ethnicity,⁶² in Thrace (more often in the south than in the north, and along the great trading routes), in Asia Minor (in particular in the territory of Magnesia on the Maeander, where third-century inscriptions clearly illustrate the exchange networks that these towns constituted in symbiosis with the city⁶³), in Lycia, in Cilicia, and in Isauria, as well as in Syria, Palestine, Transjordan, and the Negev. The country markets of Africa—the *nundinae*—represented a comparable rural network, which should be linked more to the *fundi* than to communities of free peasants.⁶⁴

Archaeology has made possible the recovery of a good number of these towns, such as Osmaniye, near the mouth of the Dalaman Çay, Alakisla in Caria, and Arif in Lycia (Fig. 5).⁶⁵ Among the more significant towns of the limestone massif, we may note El Bara (300 ha of constructed area) and Brad (Kaprobarada, with 100 ha). Similar towns sprang up in central and northern Syria, such as Tarroutia of the Merchants and Ande-

Govrin, see L. di Segni, “Christian Burial Caves at Luzit: The Inscriptions,” in *Christian Archaeology in the Holy Land: New Discoveries*, ed. G. C. Bottini, L. di Segni, and E. Alliata (Jerusalem, 1990), 315–20.

⁵⁷ P. Ness. 90.116 (p. 275); G. Dagron and J. Marcillet-Jaubert, “Inscriptions de Cilicie et d’Isaurie,” *Bulleten* 42 (1978): 373–420: an *ergolabos* serving the *kome* of Siphoi. Many members of these trades, in Cilicia and northern Syria, came from villages; cf. below, 194ff.

⁵⁸ J. and L. Robert, “Bulletin épigraphique,” *REG* 92 (1979): no. 548.

⁵⁹ P. Ness. 22.22; 36.15; 90.116 (pp. 72, 112, 275); for another (*archiatros*) at Luzit, near Beth Govrin, see di Segni, “Christian Burial Caves,” 315–20.

⁶⁰ A single, uncertain example: *PNess* 48.8 (p. 48) (*scholastikos*?).

⁶¹ Theodoret of Cyrrhus, *Histoire des moines en Syrie*, ed. P. Canivet and A. Leroy-Molinghen, 2 vols. (Paris, 1977–79) 1:7.1–3, pp. 366–68.

⁶² Karpis, Huns, Scythians, Sarmatians: V. Velkov, “Les campagnes et la population rurale en Thrace aux IVE–VIE siècles,” *BBulg* 1 (1962): 31–66; Arabs at Anasarthra: I. Shahîd, *Byzantium and the Arabs in the Sixth Century* (Washington, D.C., 1995), 1:628–30; undoubtedly the Samaritan and Jewish villages followed a similar principle.

⁶³ J. Nollé, *Nundinas instituere et habere: Epigraphische Zeugnisse zur Einrichtung und Gestaltung von landlichen Markten in Afrika und in der Provinz Asia* (Hildesheim, 1982), 10–86.

⁶⁴ B. D. Shaw, “Rural Markets in North Africa and the Political Economy of the Roman Empire,” *Antiquités africaines* 17 (1981): 7–83; H. Pavis d’Ecurac, “Nundinae et vie rurale dans l’Afrique du Nord romaine,” *BAC* 17B (1981): 251–60; Nollé, *Nundinas*, 88–162. Regarding economic complementarity between town and country, see L. De Ligt, “Demand, Supply, Distribution: The Roman Peasantry between Town and Countryside. Rural Monetization and Peasant Demand,” *Münstersche Beiträge zur Antiken Handelsgeschichte* 9 (1990): 24–56, and idem, “The Roman Peasantry: Demand, Supply, Distribution between Town and Countryside, II: Supply, Distribution and a Comparative Perspective,” *Münstersche Beiträge zur Antiken Handelsgeschichte* 10 (1992): 33–77.

⁶⁵ K. Hattersley-Smith and V. Ruggieri, S. J., “A Byzantine City near Osmaniye (Dalaman) in Turkey: A Preliminary Report,” *OCP* 56 (1990): 135–64; V. Ruggieri and F. Giordano, “Una città bizantina sul sito cario di Alakisla,” *OCP* 62 (1996): 53–88; R. M. Harrison, “Nouvelles découvertes romaines tardives et paléobyzantines en Lycie,” *CRAI* (1979): 222–39.

rin in the basalt massif to the east of Hama. In the Hauran, a wealthy network of large *komai* developed in the sixth century, as it did in the Transjordan. The “city” of Umm el-Jimal, with its fifteen churches, must have had a population of 5,000 inhabitants—slightly less than Madaba or Philadelphia, which were true cities. A prosperous agricultural “city” developed from the fifth to the eighth century after the site had lost its regular contingents, relieved by the Ghassanids, and subsequently left to fend for itself, like many other formerly fortified sites of the *limes arabicus*, following the departure of the Ghassanid phylarchate after the year 580. Kastron Mefaa (Umm ar Rasas) also had a sizable population, undoubtedly on the order of several thousands, that spilled over the fourth- to fifth-century walls of the *castellum*. The Negev also offers testimony to the development of *komai*, connected with pilgrimages to Sinai and trade with Egypt, the Arabian peninsula, and the Red Sea, but also with abundant agricultural production. Shivta (covering nearly 90 ha) and Nessana—both only slightly smaller than the cities of Elusa and Mampsis on which they depended—testify to the prevalence of these secondary centers, which developed during late antiquity. Egypt equally sustained a good number of sizable towns. Karanis, which at its zenith covered 80 ha, was comparable in size to the small city of Thmouis; its surface area, however, was barely a third that of Arsinoe.⁶⁶

The development of these towns, whose vitality made them a partial substitute for cities in the regional economy, even though they neither carried the traditional urban apparatus nor sustained the functions of an established urban culture, was a new element that anticipated the future networks of medieval cities. While legislators were aware of their existence, the role of these towns in provincial administration remained embryonic. They were in any case remarkably adaptable to the fluctuating circumstances of the sixth century. Thus, in the Pars Orientis, there seems to have been significant exploitation of agricultural potential, with an active rural population that worked the land with consummate skill refined by ancestral knowledge of nature and by the realization that the unceasing maintenance of these fields (clearing, terracing, rock removal, irrigation) was the precondition of the community’s survival and the source of its well-being. The peasant population was distributed either in farmsteads or (perhaps more often) in villages at the center of agricultural lands whose limits were demarcated with care, as is evident in northern Syria and in Jordan.⁶⁷

Landholdings and Landownership

The emperor was the preeminent landowner and had his estates managed in all regions by his administrators or leased to them through *emphyteusis*, a procedure often attested in Africa from the fourth century on.⁶⁸ These estates were to be found through-

⁶⁶ Bagnall, *Egypt*, 111.

⁶⁷ Tate, *Campagnes*; Villeneuve, “L’économie rurale et la vie des campagnes dans le Hauran antique,” 63–137.

⁶⁸ A. Marcone, “Il lavoro nelle campagne,” in *Storia di Roma*, ed. A. Schiavone, vol. 3.1 (Turin, 1993), 828–32; C. Lepelley, “Deux témoignages de saint Augustin sur l’acquisition d’un domaine impérial

out the empire—in Africa, Thrace, Cappadocia (Novel 30 of Justinian [536]), in northern Syria (the estate of Hormisdas in the limestone massif), and in the Hauran (an estate at El-Meshrefe that belonged to the empress). The church also had vast landholdings, and its landownership seems to have grown in the course of the sixth century, notably in the development of monasteries on the outskirts of villages.⁶⁹ Large landowners, who constituted an urban élite, appear most often to have owned scattered parcels of land. Their number was significant in Africa, Thrace, the Hellespont, and Cappadocia, even if the size of their properties was no longer comparable with that of the vast Roman estates. Libanios' *Discourse on Patronages*⁷⁰ refers to lands that had but a single master, large towns split among several large landowners, as well as properties of the city of Antioch that were deeded to *curiales* or to other citizens, such as teachers. The correspondence of Theodoret of Cyrrhus⁷¹ gives a glimpse of the situation in the region of Cyrrhus with respect to one Ariobindus, a consul and *magister militum* in 434, who owned the village of Sergitheum, which lay within the territory of the city; the peasants of this village, owing to poor harvests, were unable to provide him with their dues of olive oil. There were undoubtedly a good number of such large landowners in northern Syria as well.⁷² The state nonetheless imposed limitations when the ownership of a sizable *kome* might have enabled a citizen to own excessively large freeholds.⁷³ Others owned a great number of scattered properties, such as a family mentioned in the archives of Petra.⁷⁴ Large landowners, who in Egypt constituted approximately

à bail emphytéotique," *BAC* 17B (1981): 273–84. The church as well might lease its lands through *emphyteusis*; cf. the inscription at Olympia regarding Kyriakos, a reader and *emphyteutes* (D. Feissel and A. Philippidis-Braat, "Inscriptions du Péloponnèse, Appendice I," *TM* 9 [1985]: 373, no. 155). On the development of *emphyteusis*, see M. Kaplan, *Les hommes et la terre à Byzance du VI^e au XI^e siècle: Propriété et exploitation du sol* (Paris, 1992), 163–68.

⁶⁹ D. Feissel, "Magus, Mégas et les curateurs des 'maisons divines' de Justin II à Maurice," *TM* 9 (1985): 465–76; Gatier, "Villages du Proche-Orient," 28; R. S. Bagnall, "Landholding in Late Roman Egypt: The Distribution of Wealth," *JRS* 82 (1992): 128–49; J. Beaucamp, "Donne, patrimonio, chiesa (Bisanzio, IV–VII secolo)," in *Il Tardoantico alle soglie del duemila*, ed. G. Lanata (Pisa, 2000), 249–65.

⁷⁰ L. Harmand, *Libanios: Discours sur les patronages* (Paris, 1955); J.-M. Carrié, "Patronage et propriété militaire au IV^e siècle," *BCH* 100 (1976): 158–76; C. Lepelley, "Quot curiales, tot tyranni: L'image du décurion oppresseur au Bas-Empire," in *Crise et redressement dans les provinces européennes de l'empire (milieu du III^e–milieu du IV^e siècle après J.-C.)*, ed. E. Frézouls (Strasbourg, 1983), 143–56; A. Chauvot, "Curiales et paysans en Orient (fin du Ve–début du VI^e siècle ap. J.-C.)," in *Sociétés urbaines, sociétés rurales dans l'Asie Mineure et la Syrie hellénistiques et romaines*, ed. E. Frézouls (Strasbourg, 1987), 271–81; P. N. Doukellis, *Libanios et la terre: Discours et idéologie politique* (Beirut, 1995), 103–28, 202–22.

⁷¹ I. G. Tompkins, "Problems of Dating and Pertinence in Some Letters of Theodoret of Cyrrhus," *Byzantion* 65 (1995): 181–83.

⁷² Notably the references to *clerouchoi*: D. Feissel, "L'épigraphie des mosaïques d'églises en Syrie et au Liban," *Antiquité Tardive* 2 (1994): 287.

⁷³ Prokopios, *Secret History*, 30.18–19: Justinian revoked a transaction that enabled an orator of Caesarea to be master of a maritime *kome* called Porphyreon. Dagron cites the example in "Entre village et cité," 35–36.

⁷⁴ L. Koenen, "The Carbonized Archive from Petra," *JRA* 9 (1996): 183–84: three notables—brothers—inherited scattered landholdings totaling more than 134 acres.

10% of landowners, held properties of 100 arouras (30 ha). Their estates were managed in a comparatively sophisticated manner by subleasees, who often leased them to local agents; these in turn had the land worked by day laborers or sharecroppers.⁷⁵

There may also have been small landowners who lived in town and worked their allotments themselves.⁷⁶ Egypt provides a clearer example of the relations between landholdings, contradicting the traditional dichotomy between wealthy landowners living in town and small peasants. Even in other regions, there must have existed town dwellers who held small properties, such as the 53% of Hermopolites or the 40% of Antinoites who owned properties smaller than 10 arouras (approximately 3 ha),⁷⁷ which they either cultivated themselves or had farmed by others.

Current research postulates the existence of a small- or mid-sized independent peasantry, such as existed in northern Syria⁷⁸ and in the Argolid.⁷⁹ The same holds true at Nessana, in which, on the evidence of several recovered papyri, peasant landholdings (small or mid-sized, but in any event often composed of several lots) seem to have predominated.⁸⁰ It is equally certain that there were agricultural workers and tenant farmers.⁸¹ The role of slavery in agricultural labor, while attested to by texts, seems nonetheless to have been overstated.

Does all this suggest the development of a small independent peasantry, as Paul Lemerle, Alexander Kazhdan, and Michel Kaplan believe, or rather the drifting of the estate system into a “seigneurie illégitime,” as Evelyne Patlagean has suggested? Archaeology does not shed light on the system of exploitation. We know that there coexisted a wide variety of landowners, but we cannot establish the relative proportions in the absence of written sources. Similarly, the proportion of those who owned nothing and leased their labor remains unknown. On the whole, however, the houses of the limestone massif, Cilicia, and the Negev give a vague impression of wealth, even if

⁷⁵ Bagnall, *Egypt*, 150. One aroura = 2.756 m².

⁷⁶ Ibid. At the beginning of the 7th century, a good number of inhabitants of Thessalonike would make their way to the fields at harvest time; these may, however—in part at least—have been peasants who had sought refuge within the walls of the city. P. Lemerle, ed., *Les plus anciens recueils des miracles de Saint Démétrius et la pénétration slave dans les Balkans*, 2 vols. (Paris, 1979), 1: miracle 2, § 199, p. 185.

⁷⁷ Bagnall, *Egypt*, 150.

⁷⁸ Tate, *Campaignes*, 257–332. Cf. the peasant “owners and cultivators” mentioned by Theodoret of Cyrillus, *Histoires des moines de Syrie*, 2:3–4, p. 39.

⁷⁹ Jameson, Runnels, and Van Andel, *Southern Argolid*. This hypothesis nonetheless is premised on a dense level of habitation. The proliferation of small landholdings in late antique Greece has been studied by Kosso, “Public Policy and Agricultural Practice.”

⁸⁰ P. Mayerson, “The Agricultural Regime,” in *Excavations at Nessana*, ed. H. D. Colt (London, 1962), 1:211–69, esp. 225–27 (no mention of colonists or *emphyteutai*), reprinted in part in idem, *Monks, Martyrs, Soldiers and Saracens: Papers on the Near East in Late Antiquity, 1962–1993* (Jerusalem, 1994), 21–39.

⁸¹ The position of J.-M. Carrié on the colonate seems the most plausible: see “‘Le colonat du Bas-Empire’: Un mythe historiographique?” *Opus* 1 (1982.2): 351–70; “Un roman des origines: Les généalogies du ‘colonat du Bas-Empire,’” *Opus* 2 (1983.1): 205–51; idem, “Colonato del Basso-Impero: La resistenza del mito,” in *Terre, proprietari e contadini dell'impero romano dall'affitto agrario al colonato tardoantico*, ed. E. Lo Cascio (Rome, 1997), 75–150.

the fragility of the returns on agriculture is well evidenced by the sources.⁸² Finally, the voluntary westward migration of eastern peoples (from Asia Minor, Syria, and Egypt), and their key role in large-scale trade, constituted an important element of the dynamics of exchanges.⁸³

Cities and Their Role

The Development of the Early Byzantine City and Its Construction to the Mid-Sixth Century

Construction in the cities during the fifth and sixth centuries represented a significant economic undertaking. Earthquakes and wars entailed frequent rebuilding, and thus put into action an often significant level of manpower that required payment.

The Protection of Cities Even in limiting our discussion to the sixth century, the program of public works undertaken by Anastasios and Justinian was considerable. It centered, in the first instance, around the various *limes*. Weak in Italy, it was more developed on the Danube and the Euphrates and in Africa.

In the Balkans, frontier fortifications were constructed to bar attacks from a specific direction: the Long Wall of Thrace, which protected Constantinople and its hinterland, that of the Dardanelles, which sought to forestall barbarian incursions from Europe into Asia, the Long Wall of Dyrrachium, which protected the Via Egnatia as well as the city itself, the fortification of Thermopylae, and the reinforcement of the wall on the isthmus of Corinth by Victorinus, who had assumed, as one of his inscriptions clearly states, "the responsibility for the fortifications for the entirety of the Balkan provinces." Most cities were walled, and these walls were often consolidated during the first half of the sixth century. Victorinus refortified Byllis, while reducing its surface area. At Nicopolis ad Istrum a wall was erected outside the city, reserved for the troops of the garrison; it served as a place of refuge for the neighboring population, whose habitat was not circumscribed. Anastasios rebuilt the walls at Histria, Tomis, and Ratiaria, Justinian refortified Serdica, Naissus, Pautalia, Trajanopolis, Augusta Trajana, Bononia, Oescus, Novae, and Durostorum. Tiberios I (578–582) repaired Serdica's walls.

⁸² Cf. Theodore of Sykeon's interventions to rescue peasants from their state of misery and anecdotes of peasants on the brink of financial ruin: H. J. Magoulas, "The Lives of the Saints as Sources for Byzantine Agrarian Life in the Sixth and Seventh Centuries," *GOTR* 35 (1990): 59–64. Regarding the effects of agricultural crises, see E. Patlagean, *Pauvreté économique et pauvreté sociale à Byzance, 4e–7e siècles* (Paris, 1977), 74–92, and P. Garnsey, *Famine and Food Supply in the Graeco-Roman World: Responses to Risks and Crisis* (Cambridge, 1988), which opens with the description of the famine at Edessa in the year 500 contained in the *Chronicle* of ps. Joshua the Stylite (W. Wright, *The Chronicle of Joshua the Stylite, Composed in Syriac A. D. 507* [Cambridge, 1882], 32–45, pp. 23–35). See also Tate, *Campaigns*, 335–50.

⁸³ A. Avramea, "Mort loin de la patrie: L'apport des inscriptions paléochrétiennes," in *Epigrafia medievale greca e latina: Ideologia e funzione*, ed. G. Cavallo and C. Mango (Spoleto, 1995), 1–65; see D. Feissel, "Bulletin épigraphique," *REG* 108 (1995): no. 702.

The fortifications of Tomis were rebuilt in the sixth century by well-off citizens—one portion by the *makellarioi*, probably an association of merchants. The wall at Gortyna was rebuilt in 539 under the consulship of Flavius Appion.⁸⁴

In Africa, Salomon the *patrikios* undertook the fortification of the reconquered area. The Theodosian wall at Carthage seems to have been reconstructed, and in the rest of the territory, citadels were built in the center of cities and advance posts erected at the nerve centers.⁸⁵

The most costly defense works were those that Anastasios and Justinian secured in northern Syria and on the Euphrates to protect the region against the Persians, who systematically made their attacks by way of the river. The walls of these cities—Rusafa,⁸⁶ Halabiye,⁸⁷ Dara,⁸⁸ Chalcis,⁸⁹ and Antioch—are sheer masterpieces of military architecture. The architecture of the region (Rusafa, Dara, Qasr ibn Wardan,⁹⁰ Sura) includes Byzantine masonry techniques (vaults and alternating stone and brickwork), adapted to local conditions by architects dispatched from Constantinople (John and Isidore the Younger).⁹¹ The number of construction workers used in these vast work sites, which were begun more or less simultaneously, was considerable and must have further enriched a region that was still wealthy despite the first Persian attacks. At Dara, for example, workers received 4 keratia per day, 8 if they had a donkey at their disposal.⁹²

⁸⁴ T. E. Gregory, "Fortification and Urban Design in Early Byzantine Greece," in *City, Town, and Countryside in the Early Byzantine Era*, ed. R. L. Hohlfelder (New York, 1982), 43–64; F. E. Wozniak, "The Justinianic Fortification in the Interior Illyricum," in *ibid.*, 199–209; D. Feissel, "L'architecte Viktôrinus et les fortifications de Justinien dans les provinces balkaniques," *BAntFr* (1988): 136–46.

⁸⁵ D. Pringle, *The Defence of Byzantine Africa from Justinian to the Arab Conquest: An Account of the Military History and Archaeology of the African Provinces in the Sixth and Seventh Centuries* (Oxford, 1991); J. Durliat, *Les dédicaces d'ouvrages de défense dans l'Afrique byzantine* (Rome, 1981); report of N. Duval, "L'état actuel des recherches sur les fortifications de Justinien en Afrique," *CorsiRav* 30 (1983): 149–204; see also P. Troussel, "Les 'fines antiquae' et la reconquête byzantine en Afrique," *BAC* 19B (1985): 361–76.

⁸⁶ W. Karnapp, *Die Stadtmauer von Resafa in Syrien* (Berlin, 1976).

⁸⁷ J. Lauffray, *Halabiyya-Zenobia, Place forte du limos oriental et la Haute-Mesopotamie au VI^e siècle*, vol. 1 (Paris, 1983); vol. 2 (Paris, 1991), 15–26.

⁸⁸ B. Croek and J. Crow, "Procopius and Dara," *JRS* 73 (1983): 143–59; L. M. Whitby, "Procopius's Description of Dara (Buildings 2.1–3)," in *The Defence of the Roman and Byzantine East*, ed. P. Freeman and D. Kennedy (Oxford, 1986), 737–83; E. Zanini, "La cinta muraria di Dara: Materiali per un'analisi stratigrafica," *Milione* 2 (Rome, 1990): 229–64.

⁸⁹ D. Feissel and J.-P. Fourdrin, "Une porte urbaine construite à Chalcis de Syrie," *TM* 13 (1996): 299–307.

⁹⁰ F. de Maffei, "Il palazzo di Qasr ibn-Wardan dopo gli scavi e restauri," in *Arte profana e arte sacra a Bisanzio = Milione* 3 (1995): 105–87.

⁹¹ F. W. Deichmann, "Westliche Bautechnik im römischen und rhomäischen Osten," in *Rom, Ravenna, Konstantinopel, Naher Osten: Gesammelte Studien zur spätantiken Architektur, Kunst und Geschichte*, ed. F. W. Deichmann (Wiesbaden, 1982), 712–66 (earlier version published in *RM* 86 [1979]: 473–527); T. Ulbert, "Villes et fortifications de l'Euphrate à l'époque paléochrétienne," in *Archéologie et histoire de la Syrie*, ed. J.-M. Dentzer and W. Orthmann (Saarbrücken, 1989), 2:283–96.

⁹² Zacharias of Mytilene, *Historia Ecclesiastica Zachariae rhetori vulgo adscripta*, ed. E. W. Brooks (Paris, 1924), 7.6, p. 25.

The Persistence of Civil Construction and Urbanism through the Mid-Sixth Century Justinian financed and had built, by his own engineers, large infrastructures, both inside and outside cities, for example, the bridge on the Sangarios River and terraces at Antioch to overcome the depredations of torrents. Communications networks in Asia Minor and in Macedonia were the object of constant efforts from the fourth until the sixth century. The *De aedificiis* makes mention of road repair and construction near Rhegium, Bithynia, Phrygia, and in Cilicia. Mileposts have been discovered in Caria. The restoration of the Via Sebaste of Pamphylia at Sebaste, and of the roads that linked Tarsos to Podandus, and Antioch to Beroea and Chalcis,⁹³ all date to the sixth or even the seventh century. In the East, the empire maintained a network of roads that was of great utility in short- and medium-distance trade.⁹⁴

The sixth century, however, was no longer a period of booming urbanization, as distinct from the fourth and fifth centuries. Justinian ordered the construction of Justiniana Prima, which has been identified with the site of Caričin Grad, but the initiative came to a halt. Of the city there remain but three surrounding walls, one reserved for the episcopal quarter, the second for an upper city with a simple crossing of *cardo* and *decumanus*, distinguished by a circular area that calls to mind the Forum of Constantine at Constantinople; the third wall, an addition, enclosed the lower city. The axes and the plaza were bordered with brick pillars imitative of portico columns. Outside the walls, baths added an element of urban luxury.

Justinian's other urban undertakings were mere reconstructions necessitated by wars or natural catastrophes. In rebuilding Antioch, which had been destroyed by the earthquakes of 526 and 528 and leveled by the Persians, Justinian took care to restore the luster of the metropolis of antiquity that had been placed under the protection of God (Theoupolis). He enlarged Rusafa and Zenobia and endowed the cities with agoras, porticoed streets, and public baths. Elsewhere, the sixth-century emperors or governors embellished regional *metropoleis* that had been endowed earlier by their predecessors. In the large cities, earthquakes necessitated reconstruction, which was financed by the emperor, the governor, or the bishop. Such was the case at Apameia, Antioch, Pella, Gerasa, and probably Beirut, which recovered with some difficulty from an earthquake and a subsequent tidal wave in 551.⁹⁵

Often these initiatives consisted of more basic structures, such as the cistern constructed under the basilica at Constantinople during the reign of Justinian, or those at Rusafa that date to the same emperor.⁹⁶ Aqueducts, such as that from Kythrea to Salamis in Cyprus, and fountains, such as those at Gortyna, although exceptional, were constructed as late as under Herakleios. Porticoed streets were constructed or repaired at Sardis, Ephesos (where a tetrastyle was added in the 6th century), Halabiye, Bostra

⁹³ D. French, "A Road Problem: Roman or Byzantine?" *IstMitt* 43 (1993): 445–55.

⁹⁴ Cf. Avramea, "Land and Sea Communications," 56ff.

⁹⁵ A. Walmsley, "Byzantine Palestine and Arabia: Urban Prosperity in Late Antiquity," in Christie and Loseby, *Towns in Transition* (as above, note 10), 126–58.

⁹⁶ W. Brinker, "Zur Wasserversorgung von Resafa-Sergiupolis," *Damaszener Mitteilungen* 5 (1991): 119–68.

(516), Jerusalem, Caesarea Maritima, Beisan-Scythopolis, Hermopolis, and Ptolemais (a tetrastyle). In Aphrodisias the porticoes of the agora were reconstructed in the sixth century.⁹⁷ At Beisan, dedicatory inscriptions testify to a lively patronage that endured in the sixth century, made manifest in the construction, or the embellishment, of streets with porticoes.⁹⁸ Within these porticoes and *macella*, like those at Durrës (built by Anastasios) and Gerasa (partly rebuilt in the 6th century), essential trade and artisanal activity were concentrated. As in Sardis and Beirut, shops crowded the two sides of these streets, which were often lit at night.

In North Africa, as noted above, towns such as Timgad, Djemila, and Bulla Regia extended their borders beyond those of the classical period, but with an apparent partial abandonment of their ancient surrounding walls. In a number of cities, decorative monuments continued to be constructed: a triumphal arch was erected at Haidra following the Byzantine reconquest.⁹⁹ Until the middle of the sixth century, and particularly in Asia Minor, Syro-Palestine, Transjordan, and Egypt, cities were maintained, and the presence of even lines of shops testify to trade living in harmony with a population that had often reached its apogee. The world that Libanios had celebrated in the *Antiochikos* lived on.

The Development of Religious Buildings: Churches, Monasteries, and Pilgrimage Sites Starting around 450, a vast building program associated with the church was launched throughout the empire, calling up a significant level of capital: emperors, princes, and dignitaries (such as Anicia Juliana and many others whose epigrams occasionally retain the names of their dedicator), large landowners, and the faithful (even in the villages that came under the watch of civil leaders and the clergy) contributed lavishly. The church took the place of the antique temple in the collective imagination. As to scale, only Romanesque and Gothic construction programs can vie with this flourishing boom. In Constantinople and in most large centers, such as Ravenna, Ephesos, Antioch, and Thessalonike, religious architecture, which blended into imperial architecture (for it was the emperor who inspired the large churches of the capital) was the more advanced in conception and in the choice and assemblage of materials, attaining the technological limits of the age.

The era of Justinian is particularly revealing of the technological quality and the costs of construction. The names of Anthemios of Tralles and Isidore of Miletos and their theoretical grounding as *mechanopoioi* are sufficiently well known that we need not dwell on them here. But this conceptual revolution was also accompanied by a high level of care in the choice of materials that recast the convention of building. Hagia Sophia, the churches of St. Polyeuktos, Sts. Sergios and Bakchos, St. John of Ephesos, and Basilica B of Philippi are testimony to this costly revolution, whose effects

⁹⁷ C. Roueché, *Aphrodisias in Late Antiquity: The Late Roman and Byzantine Inscriptions including Texts from the Excavations at Aphrodisias Conducted by Kenan T. Erim* (London, 1989), no. 66, pp. 108–9; nos. 82–84, pp. 125–36.

⁹⁸ Tsafir and Foerster, “From Scythopolis to Baysan,” 95–115.

⁹⁹ F. Baratte and N. Duval, *Haidra: Les ruines d’Ammadara* (Tunis, 1974).

were felt as far as San Vitale in Ravenna and Qasr ibn Wardan in northern Syria. While the number of workers cited in the account of the construction of Hagia Sophia seems exaggerated, it indicates the enormous mobilization of labor that the project required. The choice and importance of the marbles, the unrivaled skill displayed in the fittings of St. Polyeuktos and Hagia Sophia (recalled in the works of Prokopios and Paul Silentiarios), and the precious metals invested in the churches' decorations and liturgical objects corresponded to an extraordinary financial undertaking. According to Gregory of Tours, all of Anicia Juliana's gold went into constructing the vaults of St. Polyeuktos.¹⁰⁰ The silver-leaf revetment of Hagia Sophia corresponded to 40,000 pounds of silver (166,000 solidi), a total that is confirmed in part by the estimates of the surface area that Marlia Mango has advanced: 35,181 pounds of silver for the altar, the ciborium, the chancel, the ambo, the *synthronon*, and the doors.¹⁰¹ E. Stein estimates the amount spent on Hagia Sophia at between 1.04 and 1.3 million solidi,¹⁰² forty or fifty times the amount that Julianus Argentarius spent on San Vitale, which totaled 26,000 solidi.¹⁰³ In the course of the year 532, the praetorian prefect Phokas spent 4,000 pounds (288,000 solidi) for Hagia Sophia.

It is curious that Justinian did not include a cupola when building the Nea Ekklesia in Jerusalem or reconstructing the church of the Nativity in Bethlehem, nor for the *katholikon* of the monastery of St. Catherine at Sinai. But the luxuriousness of these edifices implies financial outlays that must have been common through the whole of the empire. Justinian's reign witnessed the construction of numerous other churches, recorded with what seems a certain complacency in the *De aedificiis*; these were occasionally incorporated into important civil buildings, as in Sabratha or Apollonia. To these may be added the churches of Gerasa, many of which, while they do not invoke his patronage, date to Justinian's reign, as well as those erected in Cyrenaica and Tripolitania, in Africa Proconsularis (Carthage), at Ravenna (San Vitale, Sant'Apollinare in Classe, Sant'Andrea), or even at Poreč (the basilica of Euphrasius). Many churches were built or reconstructed, such as the episcopal group at Apameia, by the bishop Paul. The centers of pilgrimage, in addition to those of St. John of Ephesos and St. Catherine at Sinai, were in many cases at their height during the first half of the sixth century; such was the case at Rusafa, at Mount Nebo, and at Abu Mina. Aegean marbles were in demand throughout the empire,¹⁰⁴ and the shipwrecked cargo of Marzamemi shows the extent to which production was standardized. Luxurious liturgical fittings (patens,

¹⁰⁰ R. M. Harrison, *Excavations at Sarachane*, vol. 1 (Princeton, N.J.–Washington, D.C., 1986), 420.

¹⁰¹ M. Mundell Mango, "The Uses of Liturgical Silver, 4th–7th Century," in *Church and People in Byzantium*, ed. R. Morris (Birmingham, 1990), 245–61.

¹⁰² Stein, *Bas-Empire*, 2:459–60.

¹⁰³ S. J. B. Barnish, "The Wealth of Julianus Argentarius: Late Antique Banking and the Mediterranean Economy," *Byzantion* 55 (1985): 5–38 (citing Agnellus, *Liber pontificalis Ecclesiae Ravennatis*, MGH, 59, 77).

¹⁰⁴ J.-P. Sodini, "Le commerce des marbres à l'époque protobyzantine," in *Hommes et richesses* (as above, note 15), 1:163–86. See also J.-P. Sodini, "Marble and Stoneworking in Byzantium, Seventh–Fifteenth Centuries," *EHB*, 127, 131.

chalices, lamps on stands, chandeliers, and other lighting devices) were found not only in the large urban centers, but also in the monasteries of Lycia (the treasure of Kumlica¹⁰⁵), and in the village churches of Syria (the treasures of Kaper Koraon and of Tarroutia).¹⁰⁶

The role of construction in the Byzantine economy was thus considerable and necessarily involved all the inhabitants of the empire. It used the abundantly available surplus materials, “petrified” as it were, provided a living for dozens of trade groups, and, with respect to the church at least, represented a considerable source of profit. The wealth that was invested in the treasures of these churches, moreover, constituted a reserve against which emperors and conquerors could draw generously.

The Impoverishment of Cities

The progressive degradation of the cities is clearly perceptible through excavation and is characterized by a break with “urban logic.” Thoroughfares became dominated by shoddy and partitioned structures. The intent of public monuments became subverted: baths and buildings of importance did service as habitations or workshops, their marbles were torn out, and heating stoves were installed nearby. Refuse and spolia blocked certain areas of the sites or served as fill for floors of beaten earth. Sewers and aqueducts were abandoned, and simple trenches took up the functions of the former. Burials began to appear *intra muros*, and the walls of the city were no longer maintained.¹⁰⁷ Houses suffered a similar fate.¹⁰⁸ This typology, corresponding to a state of crisis that the city could overcome only by transforming itself, finds confirmation throughout the Mediterranean world;¹⁰⁹ it has already been noted with respect to Italy¹¹⁰ and North Africa.¹¹¹ What remains clear is that this urban withdrawal began in the course of the sixth century, with varying phases that may be tied to geographic areas.

¹⁰⁵ S. A. Boyd and M. Mundell Mango, *Ecclesiastical Silver Plate in Sixth-Century Byzantium* (Washington, D.C., 1992); report of C. Morisson, “Trésors d’argenterie des églises byzantines du VI^e siècle: Production et valeur,” *JRA* 8 (1995): 539–48.

¹⁰⁶ M. Mundell Mango, “The Origins of the Syrian Ecclesiastical Silver Treasures of the Sixth-Seventh Centuries,” in *Argenterie romaine et byzantine*, ed. F. Baratte (Paris, 1988), 163–84; eadem, *Silver from Early Byzantium: The Kaper Koraon and Related Treasures* (Baltimore, Md., 1986); A. Effenberger, “Bemerkungen zum ‘Kaper Koraon’ Schatz,” in *Tesserae: Festschrift für Josef Engemann = JbAC Ergänzungsband* 18 (1981): 241–77.

¹⁰⁷ H. Saradi-Mendelovici, “The Demise of the Ancient City and the Emergence of the Medieval City in the Eastern Roman Empire,” *Echos du monde classique/Classical Views* 32 (1988): 365–401.

¹⁰⁸ S. P. Ellis, “The End of the Roman House,” *AJA* 92 (1988): 565–76.

¹⁰⁹ See, in particular, the excellent bibliographic essay of S. J. B. Barnish, “The Transformation of Classical Cities and the Pirenne Debate,” *JRA* 2 (1989): 385–400.

¹¹⁰ Regarding the material impoverishment of Roman culture between the 6th and 7th centuries, see L. Paroli et al., *La storia economica di Roma nell’alto medioevo alla luce dei recenti scavi archeologici* (Florence, 1993).

¹¹¹ In addition to the articles cited above in note 10, see W. H. C. Frend, “The End of Byzantine North Africa,” *BAC* 19.2 (1985): 387–97.

The Balkans and Greece The state of domestic peace that the Balkans and Greece had witnessed was shattered starting in the 540s, as noted above. The Danubian *limes* was increasingly breached by peoples (Antae, Avars, Slavs) who limited themselves to episodic, albeit destructive, raids. Later, however, toward 570–580, the occupation became more concentrated and more permanent. Slavs settled in Thessaly and others destabilized the Peloponnese, provoking burials of coin hoards as numerous as those noted in Macedonia. The Slavic occupation of central Greece and certain coastal regions at the beginning of the seventh century is well attested by written sources, toponyms, and archaeological evidence. Thessalonike, Athens, Corinth, Isthmia, as well as certain coastal zones, and, naturally, the islands, maintained contact with the empire.

Athens offers a paradoxical account: baths were apparently added to a villa after 530, but a short time later the agora, in which two agricultural mills were erected, assumed a rural aspect, and certain imported ceramics became rare.¹¹² At Delphi, by around 580–590, the abandonment of patrician villas becomes evident; pottery kilns were installed within their walls and functioned until 610–620. By the mid-sixth century, the Roman forum at Corinth had become deserted, surrounded by burial sites; the city's center had moved elsewhere. Seventh-century tombs containing weapons and belt buckles testify to the presence of a Byzantine garrison composed in part of barbarian soldiers, as was the case at Tigani in the Mani. Was there still a civilian population in the Roman city? Was the Acrocorinth doing duty as a place of refuge?¹¹³

Asia Minor The studies of Clive Foss and of Wolfgang Müller-Wiener have amply demonstrated the decline of many coastal cities, such as Ephesos, and even of cities that were at some remove from the sea, such as Sardis and Ankyra, in which the Persian attacks coincided with the end of the city of antiquity and the transformation of towns into ruralized villages.¹¹⁴ The fate of other cities is comparable: Aphrodisias survived the plague of 541–542, but suffered severe depredations around 619–620, and died away, without having been conquered. While the decline of the town of Sagalassos took place earlier, it provides a somewhat comparable example.¹¹⁵ We can observe a

¹¹² J.-P. Sodini, "L'habitat urbain en Illyricum à la veille des invasions," in *Villes et peuplement dans l'Illyricum protobyzantin* (Rome, 1984), 341–97.

¹¹³ E. A. Ivison, "Burial and Urbanism at Late Antique and Early Byzantine Corinth (c. A.D. 400–700)," in Christie and Loseby, *Towns in Transition* (as above, note 10), 99–125; A. Dunn, "The Transition from *polis* to *kastron* in the Balkans (III–VII cc.): General and Regional Perspectives," *BMGS* 18 (1994): 60–80.

¹¹⁴ In addition to Foss's studies of Ephesos and Sardis, see his "Archaeology and the 'Twenty Cities' of Byzantine Asia," *AJA* 81 (1977): 469–86 (= *History and Archaeology of Byzantine Asia Minor* [Aldershot, 1990], art. 2); idem, "Late Antique and Byzantine Ankara," *DOP* 31 (1987): 29–87 (= *ibid.*, art. 6); idem, "The Cities of Pamphylia in the Byzantine Age," in *Cities, Fortresses, and Villages of Byzantine Asia Minor* (Aldershot, 1996), art. 4. W. Müller-Wiener has also emphasized the retrenchment and ruralization of towns in Asia Minor: "Von der Polis zum Kastron," *Gymnasium* 93 (1986): 435–75.

¹¹⁵ See the reports of Marc Waelkens and his co-authors in *AnatSt* 37 (1987): 37–48; 38 (1988): 53–67; 39 (1989): 61–76; 40 (1990): 185–98; 41 (1991): 197–214; 42 (1992): 79–98; 44 (1994): 169–86. See also *Sagalassos I: First General Report on the Survey (1986–1989) and Excavations (1990–1991)*, ed. M. Waelkens (Leuven, 1993); *Sagalassos II: Report on the Third Excavation Campaign of 1992*, ed. M.

degradation from the beginning of the sixth century: shops were subdivided and served as habitation, as did the adjacent porticoes. Starting in the early seventh century, possibly because of a lack of water, these houses were destroyed. A short time later, Sagalassos was abandoned by its population, which moved to nearby Aglasun where water was abundant; it was there that Byzantine Sagalassos survived. At Anemourion, the turning point took place around 580, with an earthquake from which the town never recovered.¹¹⁶ At Amorion the intent of current excavations is to show that the city suffered a specific fate. Although the city withdrew inside its ramparts during the sixth century and witnessed stagnation to some degree, it was not abandoned; its destruction took place in 838 when the Arabs captured and burned the city.¹¹⁷

The Aegean Islands, Crete, and Cyprus Unlike the continental regions (and the Balkans in particular), certain islands demonstrated a considerable vitality during the seventh century. The clearest cases are Samos¹¹⁸ and Chios.¹¹⁹ Undoubtedly, the two functioned as places of refuge, as did the little islands of the Saronic Gulf. But like these islands, Samos and Chios also played an important strategic role, as is demonstrated by the fortress of Emporio; military expenditures must have stimulated the regional economy, a conclusion for which there is evidence in the plentiful coinage and coin finds of Constans II. It is nonetheless uncertain whether military activity helped to support urban facilities. Karpathos and Rhodes undoubtedly fared similarly, but excavations do not disclose a clear sequence of events.

Herakleios' interest in the capital cities of the two islands (which shared strategic positions on Byzantium's southern front in the eastern Mediterranean) played a decisive role, starting with the Persian invasion and the subsequent Arab conquest. Crete was never occupied by the Slavs. Inscriptions dating to the reign of Herakleios, around 615, have long focused attention on the later stages of the city of Gortyna.¹²⁰ The city was substantially rebuilt following an earthquake that occurred between 618 and 621. The *praetorium* was reconstructed with a superb dedication to the emperors; the judi-

Waelkens and J. Poblome (Leuven, 1993); eadem, *Sagalassos III: Report on the Fourth Excavation Campaign of 1993* (Leuven, 1995).

¹¹⁶ J. Russell, "The Archaeological Context of Magic in the Early Christian Period," in *Byzantine Magic*, ed. H. Maguire (Washington, D.C., 1995), 35–50.

¹¹⁷ Preliminary reports of R. M. Harrison (up to and including 1993), and subsequently of C. S. Lightfoot, in *AnatSt* 38 (1988): 175–84; 39 (1989): 167–74; 40 (1990): 205–18; 41 (1991): 215–29; 42 (1992): 207–22; 43 (1993): 147–62; 44 (1994): 105–28; 45 (1995): 105–38; 46 (1996): 91–110; C. S. Lightfoot, "The Survival of Cities in Byzantine Anatolia: The Case of Amorium," *Byzantion* 68 (1998): 56–71; C. S. Lightfoot et al., "The Amorium Project: The 1997 Study Season," *DOP* 53 (1999): 333–49.

¹¹⁸ W. Martini and C. Streckner, *Das Gymnasium von Samos: Das frühbyzantinische Klostersgut* (Bonn, 1993).

¹¹⁹ M. Ballance et al., *Excavations in Chios: Byzantine Emporio* (Oxford, 1989).

¹²⁰ A. Di Vita, "Atti della Scuola, 1986–1987," *ASAtene* 64–65, n.s., 48–49 (1986–87): 503–14; idem, "Atti della Scuola, 1988–1989," *ASAtene* 66–67, n.s., 50 (1988–89): 469–71; idem, "Atti della Scuola, 1990–1991," *ASAtene* 68–69, n.s., 51–52 (1990–91): 433–71, offering a detailed examination of the different sectors studied; A. Di Vita and A. Martin, *Gortina II* (Padua, 1997).

ciary basilica was reconstructed as a hypaethral chamber, with a raised apse at the back. Herakleios rebuilt the city's water supply; an aqueduct ran alongside the *praetorium* from the south, culminating in a *castellum divisorum*, a splendid *nymphaeum*, and numerous fountains. Two colonnaded streets crossed at the *praetorium*. Within a compact urban perimeter, two living quarters developed. At the edges of the city, a significant artisanal ceramic industry arose, producing a painted tableware of high quality. Following another earthquake around 666–670, the porticoes and the main church collapsed. The town became a modest village: street paving was covered with beaten earth, the rebuilt houses now sheltered the potters who revived their production, and a church and several houses with their own oil presses sprang up in the *praetorium*. Life continued until the end of the eighth century, when another earthquake (ca. 796) provoked a retrenchment into the neighboring heights and the ancient acropolis. The town of the eighth century remained quite active and had contacts with Constantinople.

Cyprus witnessed a substantial level of prosperity throughout the sixth century and a good portion of the seventh.¹²¹ It is possible that the island's population was affected by the plague, and that Tiberios chose for that reason to relocate to Cyprus the Armenians fleeing the Persian invasion in 578. At Salamis, between 619 and 631, Herakleios and several bishops built an aqueduct to supply the city with water. The water ended in a small fortified enclosure, constructed around the church of St. Epiphanyios to protect the city center, rather than the city as a whole. The baths remain active to this day, fed by a pipe that flows from the reservoir. A villa dubbed the "oilworks" was an urban habitation until the beginning of the seventh century. Two Arab incursions in the middle of the seventh century, together with massive deportations of the population, left the island exhausted; despite a joint Arab-Byzantine condominium, it never enjoyed the system of exchanges that would have facilitated a thriving economy. Although Constantia was pillaged by Arab forces who took vast spoils from the city, it seems to have endured: its baths were put into working order and may have continued to function until the beginning of the eighth century; the basilica of St. Epiphanyios also seems to have undergone repairs. The pilgrim Willibald, who visited the town in 723, found Constantia inhabited by farmers.

The Arab attacks did not entail the wholesale abandonment of urban life within the two islands; rather, it took place as a generalized process toward the beginning of the eighth century. These regions became entirely ruralized, but the ruralization occurred much later than it did elsewhere. This temporal displacement, which also characterizes Amorion, to some extent attenuates the highly pessimistic view of the size of the Byzantine provincial population during the seventh century. The end of the late antique city occurred later, and its transformation into the rural village with a developed artisanal industry enables us, for the first time, to shed light on the Dark Ages.

¹²¹ A. Papageorgiou, "Cities and Countryside at the End of Antiquity and the Beginning of the Middle Ages in Cyprus," in *The Sweet Land of Cyprus*, ed. A. A. M. Bryer and G. S. Georghallides (Nicosia, 1993), 27–51.

Syria-Palestine and Egypt Antioch had fallen into decline prior to the arrival of Islam, but it remained a regional center before the Byzantine reconquest in the late tenth century infused it with new life. In other areas,¹²² excavations show that certain characteristics of urban atrophy occurred, possibly beginning with the Persian occupation, certainly by the Umayyad period: the encroachment of shops and houses onto the street, the installation of artisanal workshops in the town center, as occurred at Gerasa and at Beisan (pottery kilns) or at Apameia (shops in the ancient episcopal quarter, bordering the *cardo*). The strata of the towns rose higher, as if waste products were no longer being hauled away but were simply deposited in layers. Houses were, however, carefully constructed and organized into quarters at Gerasa and Pella. Large villages such as Umm ar-Rassas and Umm el-Jimal remained quite active. Urban artisanal industries flourished: mosaic work, architectural sculpture, the crafting of bronze dishes. The water supply was no longer ensured by aqueducts.

In contrast with the areas that remained Byzantine, a good number of cities within the interior of the region survived until the ninth and tenth centuries: Apameia and Chalkis ad Belum in the north; Gerasa, Beisan, and Pella in the south, all three severely shaken by the earthquake of 749. Other cities grew in size following the Muslim conquest for specific economic, political, or religious reasons: Damascus, Aleppo, Homs, and Jerusalem. The same pattern applies to Egypt.

Demography

The sixth century was dominated by one major event—the Great Plague, which occurred in 542; cyclical recurrences followed until the end of the century and persisted, albeit less destructively and at increasingly longer intervals, until the beginning of the eighth. Contemporary authors (Prokopios, Evagrius Scholastikos, and John of Ephesos) left accounts of it, imitative of Thucydides to a greater or lesser degree, but by no means completely indebted to the historian of Athens.¹²³ Originating in Egypt, where it broke out in the fall of 541, the pandemic struck the capital in the spring of 542 and Gaza, Antioch, and Syria in the same year, before spreading into Asia Minor and the Balkans, reaching the West in 543; it radiated particularly in cities and shore regions,

¹²² H. Kennedy, "Antioch: From Byzantium to Islam and Back Again," in *The City in Late Antiquity*, ed. J. Rich (London, 1992), 196–97; idem, "The Last Century of Byzantine Syria," *ByzF* 10 (1985): 141–83; Walmsley, "Byzantine Palestine and Arabia."

¹²³ P. Allen, "The 'Justinianic' Plague," *Byzantion* 49 (1979): 5–20; L. Conrad, "The Plague in Bilad al-Sham in Pre-Islamic Times," *Bilad al-Sham during the Byzantine Period*, ed. M. A. al-Bakhit and M. Asfur, 2 vols. (Amman, 1986), 2:143–63; idem, "Epidemic Disease in Central Syria in the Late Sixth Century: Some New Insights from the Verse of Hassán ibn Thábit," *BMGS* 18 (1994): 12–58; J.-N. Biraben, *Les hommes et la peste en France et dans les pays européens et méditerranéens*, 2 vols. (Paris–The Hague, 1975–76), 1:25–48. L. Conrad, "The Plague in the Early Medieval Near East" (Ph.D. diss., Princeton University, 1981); D. Stathakopoulos, "Die Terminologie der Pest in byzantinischen Quellen," *JÖB* 48 (1998): 1–7. M. McCormick, "Bateaux de vie, bateaux de mort, maladie, commerce, transports annonaires et le passage économique du Bas-Empire au Moyen Age," *Settimane* 45 (1998): 35–122; B. Grmek, "Les conséquences de la peste de Justinien dans l'Illyricum," *Acta XIII CIAC*, 3 vols. (Vatican City–split, 1998), 2:787–94.

and, conveyed with merchandise, it coursed along commercial routes. It raged in Constantinople for four months in the course of which more than 10,000 died per day according to Prokopios, as many as 16,000 according to John of Ephesos, and it may well have been an important factor in the reduction of the capital's population by as much as half.¹²⁴ There is no lack of written testimony concerning its manifestations (the symptoms and description of bubonic plague), the immediate problems that the plague entailed (the disposal of corpses), and its consequences: a shortage of wheat and wine in 543 as a result of the lack of manpower during the harvest of the prior summer; a rise in prices and wages that Justinian regulated in his Novel 122, as well as new shortages resulting from various recurrences. There is, however, disagreement among historians as to its significance.

Jean-Noël Biraben holds that the plague entailed a catastrophic decline, and James Russell, as well as Pauline Allen, believes that deaths associated with it took, on average, a third of the population.¹²⁵ Jean Durliat, to the contrary, concludes, on the basis of an examination of the narrative sources and their contradictory accounts, as well as epigraphic, papyrological, and archaeological sources (and what they do not tell), that "the plague was certainly deadly, but that it forced the flight of at least as many as it killed," and that "its consequences . . . were limited." He notes the scarcity of explicit references to the plague in the epitaphs that have survived, while noting the concentration of certain burials that are undoubtedly attributable to it at Nessana or at Sbeitla.¹²⁶ (One might supplement the cases that Durliat cites with examples from the Negev dating from 541 to 543.¹²⁷) He thus declines to draw comparisons between the Justinianic plague and the Black Death of the fourteenth century pending an inquiry conducted by specialists in the various categories of sources and "a closer analysis of the epigraphic, numismatic, and other data," and believes that the phenomenon constitutes "a major historical problem rather than an incontrovertible fact of economic and social history."¹²⁸

Reporting on this position, Biraben has emphasized that contradictions in the texts and the silence of many of the other documents are equally observable in accounts of the Black Death and thus do not offer a decisive argument.¹²⁹ Current knowledge

¹²⁴ Mango, *Développement urbain*, 51.

¹²⁵ Biraben, *Les hommes et la peste*.

¹²⁶ The sole reference (to these authors' knowledge as the text was going to press), to a death from πότμος βουβώνος, appears in the epitaph of Ezra (J. Koder, "Ein inschriftlicher Beleg zur 'justinianischen' Pest in Zora (Azra'a)" in ΣΤΕΦΑΝΟΣ: *Studia byzantina ac slavica Vladimíro Vavřínek ad annum sexagesimum quintum dedicata* (= *BSI* 56.2 [1995]: 13–18); it may be contrasted with that of Rhodopaeus, *pater civitatis* and σιτώνης, who cast out plague and famine by means of baths and provisioning (λουτροῖς καὶ σιταρχίαις λοιμὸν καὶ λιμὸν ἀπελάσαντα); commentary by Roueché, *Aphrodisias*, 137–41.

¹²⁷ Y. E. Meimarís, *Chronological Systems in Roman-Byzantine Palestine and Arabia: The Evidence of the Dated Greek Inscriptions* (Athens, 1992), nos. 280–92, pp. 236–37.

¹²⁸ J. Durliat, "La peste du VI^e siècle," in *Hommes et richesses* (as above, note 15), 1:106–19, at 118–19.

¹²⁹ J.-N. Biraben, "Rapport: La peste du VI^e siècle dans l'Empire byzantin," in *Hommes et richesses* (as above, note 15), 1:121–25. We might add, with respect to the epigraphy, that the climate of an epidemic would hardly favor erecting and carving funerary steles (see the observations of Roueché, *Aphrodisias*, 137–41, on the mediocre quality of an engraving subsequent to the plague compared to an earlier inscription in honor of Rhodopaeus). The cost of funerary monuments should also be kept

of epidemiology has shown in fact that the demographic consequences of plagues that occur during prosperous or less troubled times may be limited and that population recovery may be rapid; it is observable in Egypt, for example, where the recovery occurred within a few decades of the Antonine epidemic.¹³⁰ The same does not hold true, however, when plague occurs in conjunction with other epidemics—Biraben here mentions the evidence of smallpox beginning at the end of the sixth century—and with wars. This connection is clear in Italy beginning in 562, after the ten-year respite that followed the end of the wars against the Goths; the cyclical recurrences of the *pestis inguinaria* in 592 and 601, for example, increased with the depredations of the Frankish and Lombard armies. Paul the Deacon makes an explicit connection between the plague, the depopulation of northern Italy, and the Lombard occupation.¹³¹ Nor are we barred from asking whether reductions in the army's manpower at the end of the reign of Justinian, condemned by Justin II, were not in part at least linked to the plague.¹³² Conrad, with respect to Syria, ascribes the increased pressure of nomads on the whole of society to these epidemics, which affected the sedentary population more than they did the nomads. Tate, by contrast, holds that the inhabitants of villages were less affected than those of the cities, but that the decline of the urban population deprived them of their earlier trading outlets and set into motion the end of their prosperity. It is difficult, in any event, to deny that these factors affected the decline of urban life in the East, analyzed above.¹³³

Agricultural Production

Products

Agricultural products of the Mediterranean region during the sixth century were identical with the products of antiquity. A few examples taken from the north and south of

in mind: the price of a tomb during the 6th century ranged from 2 to 6 solidi (see J.-P. Callu, "Les prix dans deux romans mineurs d'époque impériale," in *Les "dévaluations" à Rome: Époque républicaine et impériale*, 2 vols. [Rome, 1979–80], 2:194 n. 28, citing de Rossi, *La Roma sotterranea cristiana* 3 [1877], 549, for prices of 2, 3⅓, and 6 solidi). For a price of 4¼ solidi in Thessalonike, see E. Tsigaridas and K. Loverdou-Tsigarida, *Κατάλογος χριστιανικῶν ἐπιγραφῶν στὰ μουσεῖα τῆς Θεσσαλονίκης* (Thessalonike, 1979), no. 24; see also D. Feissel, *Recueil des inscriptions chrétiennes de Macédoine du IIIe au VIe siècle* (Athens–Paris, 1983), 149, with supplementary references.

¹³⁰ D. Rathbone, "Villages, Land and Population in Graeco-Roman Egypt," *Proceedings of the Cambridge Philological Society* 216, n.s., 36 (1990): 103–42, cited by R. Bagnall and B. W. Frier, *The Demography of Roman Egypt* (Cambridge, 1994), 174.

¹³¹ L. Cracco Ruggini, *Economia e società nell'Italia annonaria: Rapporti fra agricoltura e commercio dal IV al VI secolo d. C.* (Milan, 1961; repr. Bari, 1995), app. 2, 478–89.

¹³² *Agathiae Myrinaei Historiarum libri quinque*, 5.13.7, ed. R. Keydell (Berlin, 1967), 180; *prooimion* to Novel 148 (566), *CIC* 3, 722; cf. A. H. M. Jones, *The Later Roman Empire, 284–602: A Social, Economic, and Administrative Survey*, 2 vols. (Norman, Okla., 1964), 1:301–2.

¹³³ Patlagean, *Pauvreté économique*, 85–92 (for analysis of the effects of the plague, although this analysis is not, however, subsequently adopted to explain the decline in population, which is ascribed to wars, pp. 426–28); H. Kennedy, "The Last Century of Byzantine Syria: A Reinterpretation," *ByzF* 10 (1985): 141–83; J. Haldon, *Byzantium in the Seventh Century: The Transformation of a Culture* (Cambridge, 1990), 111–12.

the empire will suffice. Wheat was produced in abundance in Sicily, Tunisia, Egypt, the plains of Asia Minor, and Thrace. At Dinogetia, Sadovec, and Iatrus-Krivina, we find varieties of wheat, hard and soft. At Dinogetia, wheat seems to be associated with rye in the diet, in ratios ranging from 77–85% wheat to 15–23% rye.¹³⁴ The attempt to pair a tender cereal with one more hardy should perhaps be linked to the utilization in late antiquity of the better-keeping hard wheat,¹³⁵ samples of which have been found at Iatrus-Krivina.¹³⁶ Barley, rye, millet, and oats have also been discovered at the site, along with numerous pulses (peas, vetch, and lentils). Hard wheat and a variety of rye may nonetheless have been imports, since they cannot be cultivated in this part of what is now Bulgaria. At Hesban, the flotation analysis of grains and carbonized remains has revealed the presence of two varieties of wheat and one variety of barley.¹³⁷ In an inscription at the synagogue of Rehov, cereal products appear as bread dough and flour.¹³⁸ A few data as to yield may be gleaned from the Life of St. Nicholas of Sion and the Nessana papyri: 1:5 to 1:7 for wheat, slightly more for barley.¹³⁹ The evidence with respect to Egypt is a case apart by virtue of the physical specificities of the region's agricultural production and its papyrological documentation.¹⁴⁰

The importance of bread is evident throughout the empire. The *annona* was merely the expression of this need, felt by both urban and rural populations, as well as by monastic communities.¹⁴¹ Wine and oil as well were basic products, common to all areas; their production and trading were fundamental to the economy of the sixth century, even if we can hardly speak of a high degree of specialization and long-distance export, as occurred during the Roman period in the Iberian peninsula and in North Africa.¹⁴² In what is now Tunisia, nonetheless, olive oil production remained significant

¹³⁴ A. Suceveanu and A. Barnea, *La Dobroudja romaine* (Bucharest, 1991), 225–26.

¹³⁵ H. Helbaek ("Late Bronze Age and Byzantine Crops at Beycesultan in Anatolia," *AnatSt* 11 [1961]: 90–91, cited by A. Kazhdan, "One More Agrarian History of Byzantium," *BSI* 55 [1994]: 76) posits the existence of hard wheat during the 10th century and its absence at Beycesultan during the late Bronze Age. Hard wheat has been found at Carthage, but its precise identification is uncertain (*Triticum durum/aestivum*): E. S. Hoffman, "Plant Remains from Vandal and Byzantine Deposits," in *Excavations at Carthage 1977, Conducted by the University of Michigan*, ed. J. Humphrey (Ann Arbor, 1981), 259–68, esp. 261; W. van Zeist, "Botanical Remains," in Hurst, *Excavations at Carthage* (as above, note 9), 325 (7th century); M.-C. Amouretti (*Le pain et l'huile dans la Grèce antique: De l'aire au moulin* [Paris, 1986], 39 n. 50), in considering finds of hard wheat at Knossos from the Minoan period and after, suggests an ancient presence (which was nonetheless to remain sporadic!).

¹³⁶ E. Hajnalova, "Die archäobotanische Funde," in *Iatrus-Krivina* (Berlin, 1991), 4:261–98 (manuscript submitted in 1983).

¹³⁷ P. Crawford, Øystein Sakala, and R. B. Stewart, "The Flotation Remains: A Preliminary Report," in R. S. Boraas and L. T. Geraty, *Hesbon, 1974* (Berrien Springs, Mich., 1976), 185–87.

¹³⁸ J. Sussman, "The Inscription in the Synagogue at Rehov," in *Ancient Synagogues Revealed*, ed. L. I. Levine (Jerusalem, 1981), 146–53.

¹³⁹ Patlagean, *Pauvreté économique*, 246–48; M. Evenari, L. Shanan, and N. Tadmor, *The Negev: The Challenge of a Desert*, 2d ed. (Cambridge, 1982), 120–25; Kaplan, *Les hommes et la terre*, 80–84.

¹⁴⁰ Bagnall, *Egypt*, 23–25.

¹⁴¹ Y. Hirschfeld, "The Importance of Bread in the Diet of Monks in the Judean Desert," *Byzantion* 66 (1996): 143–55.

¹⁴² R. B. Hitchner, "Olive Production and the Roman Economy: The Case for Intensive Growth in the Roman Empire," in *La production du vin et de l'huile en Méditerranée*, ed. M.-C. Amouretti and J.-P. Brun (= *BCH*, suppl. 26 [1993]), 499–508.

and dominated important outlets in Tarragon; the region's ties to Rome and Constantinople diminished little by little, beginning in the late sixth century, if not earlier. Vineyards and olive tree plantations are mentioned in the censuses of Hypaipa in Lydia, Thera, and Lesbos,¹⁴³ as well as in the *Tablettes Albertini*, which date to the end of the fifth century.¹⁴⁴ In Egypt, olive oil was prized, but it does not often appear in papyrological documentation; the most common type of oil was produced from the seeds of *lachanon*.¹⁴⁵

In addition to these basic foodstuffs, there were many other vegetables, as well as edible plants and fruit. Figs and dates played an important role, the latter particularly in Egypt and in Palestine III. Egyptian papyri, the Nessana papyri, inscriptions,¹⁴⁶ and texts¹⁴⁷ (in particular a chapter in the *Geoponika* that provides a succinct calendar of vegetables to be sown and planted in the region of Constantinople)¹⁴⁸ point to an extremely broad variety of products, with strong regional variations, which might at different stages represent significant commercial commodities. Excavations are increasingly providing information regarding the plant environment and the kinds of plants that were cultivated, whether at Iatrus-Krivina,¹⁴⁹ Hesban,¹⁵⁰ Nessana,¹⁵¹ or Karanis,¹⁵² to name but a few varied sites in the early Byzantine area. Mosaics may also reflect, if indirectly, certain local products. Mention should also be made of other agricultural products such as flax (attested at Iatrus-Krivina) and varieties of timber used for heating, construction, or shipbuilding (in Cyprus, Lycia, Lebanon, or the massif of Amanus).

Toolmaking had altered little since antiquity.¹⁵³ Nonetheless, water mills began to become widespread during the sixth century; we have evidence of the fact in an in-

¹⁴³ A. Déléage, *La capitation du Bas-Empire* (Mâcon, 1945), 148–201.

¹⁴⁴ C. Courtois et al., *Tablettes Albertini: Actes privés de l'époque vandale, fin du Ve siècle* (Paris, 1952), 201–2.

¹⁴⁵ Bagnall, *Egypt*, 30.

¹⁴⁶ That of Rehov mentions peas, Egyptian beans, squash, melons, cucumbers, parsnips, dried lupins, dried figs, cakes of pressed dates, leeks, sesame, mustard, rice, nuts, and dried plums (?). See also the *Tablettes Albertini*: olive trees (by overwhelming majority), fig trees (three times less), almond and pistachio trees, and oaks (very few).

¹⁴⁷ Patlagean, *Pauvreté économique*, 36–53, has assembled the main data known from texts; regarding the dietary regimen of monks in Palestine, see Y. Hirschfeld, *The Judean Desert Monasteries in the Byzantine Period* (New Haven, Conn., 1992), 82–91.

¹⁴⁸ J. Koder, *Gemüse in Byzanz: Die Versorgung Konstantinopels mit Frischgemüse im Lichte der Geoponika* (Vienna, 1993); idem, "Fresh Vegetables for the Capital," in *Constantinople and Its Hinterland*, ed. C. Mango and G. Dagron (Aldershot, 1993), 49–56; see also J. Lefort, "The Rural Economy, Seventh–Twelfth Centuries," *EHB* 246.

¹⁴⁹ Peas, fava beans, capers, lentils, vetch, nuts, peaches, wine-grapes, mulberries, and poppies. Plant remains have also been found at Caričin Grad by J.-M. Spieser and B. Bavant.

¹⁵⁰ Three pulses (vetch, fava beans, lentils), olives, apricots, dates, and grapes.

¹⁵¹ Colt, *Excavations at Nessana*, 1:258, app. 1: colocynth (bitter apple), clover, oats, barley, rye, wheat, nuts, laurel, pomegranates, almonds, peaches, and wine grapes.

¹⁵² Bagnall, *Egypt*, 31.

¹⁵³ A. A. Bryer, "Byzantine Agricultural Implements: The Evidence of Medieval Illustrations of Hesiod's *Works and Days*," *BSA* 81 (1985): 45–80, and idem, "The Means of Agricultural Production: Muscle and Tools," *EHB* 99–111; cf. Lefort, "Rural Economy," 228–29; Amouretti, *Le pain et l'huile*; Henning, *Südosteuropa zwischen Antike und Mittelalter*.

scription at Sardis, the mills of the agora at Athens, and a water wheel found to the north of Caesarea in Palestine.¹⁵⁴ There was an appreciable development in the techniques of extracting oil and wine during the early Byzantine period. Treading areas, characteristically fitted with a channeled floor that overhung various basins into which the juice flowed,¹⁵⁵ were now endowed with a press, which served to effect a second extraction of lesser-quality juice from the skins and pulp residue. The presses could be levered, as they were in Greece and in the West,¹⁵⁶ or activated by a central screw mechanism that pressed the residues directly, as in the Hauran, Arabia, and the provinces of Palestine.¹⁵⁷ Oil presses evolved as well, with winch-activated counterweights progressively replaced by levered counterweights. Within Africa, it is only at Carthage that we find a few examples of these levered counterweights;¹⁵⁸ they were widespread in Provence, Spain,¹⁵⁹ the Pontus, Bithynia, Phrygia, and Caria. Levered presses, from which the oil was recovered in vats placed below the press-bed, have been found in Judea.¹⁶⁰ Recovery of the oil operated similarly in the case of counterweight presses. While Roman pressworks, particularly in Africa, had several presses (up to six) within the same building, early Byzantine pressworks rarely made use of more than two, and generally in privately owned structures (in a few cases, monasteries also had their own presses). The oil production was thus no longer concentrated; it was in the hands of small-scale operators, whatever their status might otherwise be, and whatever the distribution pattern of the commodity—whether in-kind payment of a portion of the harvest to the village's landowner¹⁶¹ or the direct sale to oil merchants.¹⁶²

¹⁵⁴ J.-P. Sodini, "L'artisanat urbain à l'époque paléochrétienne (IVe–VIIe s.)," *Ktema* 4 (1979): 97–100; idem, "La contribution de l'archéologie à la connaissance du monde byzantin (IVe–VIIe s.)," *DOP* 47 (1993): 147 nn. 46–47.

¹⁵⁵ For Greece, see E. Kourkoutidou-Nicolaïdou, "Αγροτικές εγκαταστάσεις παραγωγής κρασιού στην περιοχή των Φιλίππων (4ος–6ος αι. μ. Χ.)," in Doukellis and Mendoni, *Structures rurales et sociétés antiques* (as above, note 37), 463–70.

¹⁵⁶ P. Bruneau and P. Fraisse, "Pressoirs déliens," *BCH* 108 (1984): 717; J.-P. Brun, "L'oléiculture et la viticulture antiques en Gaule: Instruments et installation de production," in Amouretti and Brun, *Production du vin et de l'huile* (as above, note 142), 307–41, and idem, "La discrimination entre les installations oléicoles et vinicoles," in *ibid.*, esp. 523–26.

¹⁵⁷ Y. Hirschfeld and R. Birger, "Early Roman and Byzantine Estates Near Caesarea," *IEJ* 41 (1991): 81–111; I. Roll and E. Ayalon, "Two Large Wine Presses in the Red Soils Regions of Israel," *PEQ* 113 (1981): 111–25; S. Dar, *Landscape and Pattern: An Archaeological Survey of Samaria, 800 B.C.E.–636 C.E.* (Oxford, 1986), 147–63.

¹⁵⁸ G. Quilico, "Contrepoids de pressoirs à vis retrouvés à Carthage," *CEDAC Carthage Bulletin* 14 (1994): 47–48.

¹⁵⁹ P. Castanyer Masoliver and J. Tremoleda i Trilla, "La villa de Vilauba: Resultados de las ultimas campañas de excavación (1990–1993)," *JRA* 8 (1995): 275–77.

¹⁶⁰ R. Frankel, "Oil Presses in Western Galilee and the Judaea: A Comparison," in *Olive Oil in Antiquity*, ed. D. Eitam and M. Heltzer (Haifa, 1987; Padua, 1996), 63–80; idem, "An Oil Press at Tel Safsafot," *Tel Aviv* 15/16.1 (1988–89): 77–91.

¹⁶¹ Theodoret of Cyrrhus, ep. 18, in Tompkins, "Some Letters," 182.

¹⁶² Theodoret of Cyrrhus, in *Histoire des moines de Syrie*, 2:27.2, pp. 36–37: a hermit, Abraames, passes himself off as a merchant seeking to purchase the village's entire stock of nuts.

Food of Animal Origin

Livestock, both large and small, held an important place in the Mediterranean world. Its character varied considerably according to the importance of pasturage. Thessaly, Epiros, Thrace, and the plains and plateaus of Asia Minor have produced livestock from time immemorial. Texts provide many references to the consumption of beef, notably the Life of St. Nicholas of Sion, which traces the saint's rounds and his slaughtering of cattle in the villages of Lycia. The monks of Theodore of Sykeon distributed beef to the inhabitants of the village. Beef was consumed at Dehes and Hesban.¹⁶³ Cattle were also valued for the production of milk and cheese, as well as for their hides. Hump-backed cattle, closely related to present-day zebu, must have been numerous, particularly in marshy regions (Apameia). Farms and village houses kept ranks of feeding stalls on the ground floor of their main buildings, separated by pillars that supported the second floor. These features are common in northern Syria, the Hauran, and the Negev. Pillars have been found in the Golan (notably at Meiron), but an interpretation of these finds as evidence for feeding stables does not seem to have been adopted by site excavators, although it would seem the most plausible. While cattle must often have been lodged in these stables, it is also likely that horses and mules had similar shelters. There are no clear, published criteria, however, that permit us to distinguish horse stables from cattle stables.

Goats, sheep, and other flock animals were lodged in the courtyards of village houses or, on farms, within enclosures, which have been found in a number of cases near water troughs. Their existence is attested in the cadasters of Thera and Lesbos. At Hesban, there is a noticeable increase in the number of goats, undoubtedly after the early Byzantine period; this may indicate an impoverishment in the condition of the pastures, as grass gave way to low shrubs and bushes.¹⁶⁴ In North Africa, where evidence of meat consumption varies by location, sheep exceeded large livestock by a wide margin.¹⁶⁵ In addition to meat, they provided milk, cheese, and wool.

Pork was highly valued in Rome; it was distributed in annona rations, and the guild of pork butchers (*corpus suariorum*) seems to have been more important than that of the *pecuariorum* (butchers of small livestock) and the *boarii* (beef butchers).¹⁶⁶ It was equally so in Italy and North Africa, as instanced by a miracle from the first half of the fourth century that portrays a butcher from Uzalis and his son.¹⁶⁷ The cadaster of Hy-

¹⁶³ Dehes: *Syria* 57 (1980): 300; Hesban: see note 164.

¹⁶⁴ J. Boessneck and A. van den Driesch, "Preliminary Analysis of the Animal Bones from Tell Hesban," in R. S. Boraas and L. T. Geraty, *Heshbon, 1976: The Fifth Campaign at Tell Hesban. A Preliminary Report* (Berrien Springs, Mich., 1978), 259–87.

¹⁶⁵ See the summary table on bovine, ovine, and swine remains compiled by D. J. Mattingly and R. B. Hitchner, "Roman Africa: An Archaeological Review," *JRS* 85 (1995): 197, table 1.

¹⁶⁶ Durliat, *De la ville antique*, 74–80, 94–107; B. Sirks, *Food for Rome: The Legal Structure of the Transportation and Processing of Supplies for the Imperial Distributions in Rome and Constantinople* (Amsterdam, 1991), chap. 13.

¹⁶⁷ J.-M. Lassère, "Miracles et vie économique en Afrique au Ve s.: A propos d'un troupeau de cochons (*De miraculis Sancti Stephani protomartyris libri duo*, I.14)," *L'Africa Romana* 8 (1991): 305–15.

paipa (Lydia) mentions pigs. Remains of them have been found at Dehes, Nessana,¹⁶⁸ and Hesban, where they were most in abundance during the early Byzantine period. In Egypt, pork was the most common meat.¹⁶⁹ Chickens and pigeons were equally a source of meat; dovecotes were numerous in the countryside of the Near East, and there is abundant evidence for the consumption of chicken in the early Byzantine levels at Apameia, Pella, and Carthage.

In fifth- and sixth-century Carthage, pork (pigs were in many cases slaughtered for meat at under a year in age) and sheep or goats (generally slaughtered prior to their twenty-eighth month; only rarely at under a year) were the most widely consumed meats. In one sector of the city, horses and camels were also consumed.¹⁷⁰ At Apameia, changes in diet took place following the Sasanian conquest. The consumption of small livestock (sheep and goats) increased, while that of large livestock decreased appreciably. Pork consumption also dropped significantly, particularly in contexts dating to the seventh and eighth centuries, that is, in the time of Islamic rule (whereas consumption during the same period at Pella remained high).¹⁷¹ The consumption of fowl doubled.¹⁷²

Fish constituted a significant portion of the diet in large cities such as Constantinople¹⁷³ and Antioch, in which, as Libanios notes with pride, both salt- and freshwater fish were to be found. At Dehes and Apameia, numerous remains of silurids and catfish have been identified. At Carthage, fish remains have been found in great variety;¹⁷⁴ at the end of the sixth century, fish was consumed far in excess of fowl, which had not been the case earlier. Shellfish played a role in the diet, but were particularly valued for their purple dye, which was used to dye cloth.¹⁷⁵ The consumption of meat, while variable, was more common among laypeople than is suggested by our sources, which describe the diet of monks.

Donkeys seem to have been more important than horses as draft animals. The use of mules increased to a certain extent during the early Byzantine period. Camels were

¹⁶⁸ Colt, *Nessana*, 1:69.

¹⁶⁹ Bagnall, *Egypt*, 28–29: numerous pig bones found in excavations at Karanis.

¹⁷⁰ J. H. Schwarz, “The (Primarily) Mammalian Fauna,” in *Excavations at Carthage: The British Mission*, vol. 1.1 (Sheffield, 1984), 229–65; D. E. Reese, “Faunal Remains from Three Cisterns,” in Humphrey, *Carthage 1977* (as above, note 135), 191–258; M. A. Levine, “The Analysis of Mammal and Bird Remains,” in Hurst, *Excavations at Carthage* (as above, note 9), 314–24; A. King, “Diet in the Roman World: A Regional Inter-site Comparison of the Mammal Bones,” *JRA* 12 (1999): 168–202.

¹⁷¹ R. H. Smith, *Pella of the Decapolis*, 2 vols. (Wooster, Ohio, 1973), 1:162.

¹⁷² A. Gautier, “La faune de quelques maisons d’Apamée,” in *Apamée de Syrie: Bilan des recherches archéologiques, 1973–1979. Aspects de l’architecture domestique d’Apamée*, ed. J. Balty (Brussels, 1984), 305–58; idem, *Les restes de vertébrés de la Maison aux Consoles* (Brussels, 1977).

¹⁷³ References to 6th-century sources in G. Dagron, “Poissons, pêcheurs et poissonniers de Constantinople,” in Mango and Dagron, *Constantinople and Its Hinterland* (as above, note 148), 57–73.

¹⁷⁴ A. Wheeler, “The Fish Remains,” in Humphrey, *Carthage 1977* (as above, note 135), 231–41 and 249. Tuna, absent in this sampling, has been found in the surveys of the circular harbor, Hurst, *Excavations at Carthage* (as above, note 9), 319.

¹⁷⁵ See, for Carthage, J. Zaouali, “Marine and Land Molluscs,” in Hurst, *Excavations at Carthage* (as above, note 9), 320–24.

widespread as far west as Asia Minor, and essential in the Near East. Both camels and horses could be used as food when necessary. Crises notwithstanding,¹⁷⁶ the supply of food seems to have been adequate to the needs of the population throughout the empire. There were significant surpluses in the sixth century that facilitated the provisioning of cities (Constantinople most importantly) and the army. With the loss of important wheat-growing land during the seventh century, however, changes in the diet of the empire followed; the role of bread diminished, while that of meat and fish grew.

Artisanal Production and Small-Scale Trade

References to trades hold an important place in epitaphs from the fourth century on. The cause may have been the strengthening of the guilds, which gave each artisan the sense of belonging to a profession that was to be protected, or it may be linked to the system of tomb purchases, although we have no proof that guilds participated in the purchase of a sepulcher, either in Korykos¹⁷⁷ or in Tyre,¹⁷⁸ which provide the two largest groups of such epitaphs. Pride in one's craftsmanship, and its assertion in the tombs' inscriptions, were perhaps accentuated by rivalry between social groups. The strength of the trades in any event gave rise to a great diversification of subtrades within certain branches of activity.¹⁷⁹ While there were, as we have seen, artisans in the larger villages, these small trades were, for the most part, an urban phenomenon.

Provisioning and the hardware trades were particularly well represented, the first undoubtedly implicating rural inhabitants as well. The place in which commercial activity took place is often specified: a baker in Nicaea had his shop near the stone tetrapylon;¹⁸⁰ at Nea Anchialos, a salt meat or fish merchant sold his produce at the agora.¹⁸¹ Fine examples of taverns have been found at Sardis (Fig. 6).¹⁸²

Construction flourished during this period, as indicated above, developing as much in the city as it did in the countryside, and calling into play a large number of village inhabitants and, in some cases, seasonal workers.¹⁸³ The trade included marble workers (who may be linked with the epitaphs of the "Proconnesians"),¹⁸⁴ stonecutters (whose

¹⁷⁶ For a good inventory of the crises in large early-Byzantine cities, see Durliat, *De la ville antique*, 321–422.

¹⁷⁷ MAMA 3: nos. 200–788; Patlagean, *Pauvreté économique*, 158–63.

¹⁷⁸ J.-P. Rey-Coquais, "Inscriptions de la nécropole (Tyr)," *BMBeyr* 29 (Paris, 1977); cf. J. and L. Robert, "Bulletin épigraphique," *REG* 89 (1978): 522.

¹⁷⁹ K. P. Mentzou, *Συμβολαί εις την μελέτην του οικονομικού καὶ κοινωνικού βίου τῆς πρωΐμου βυζαντινῆς περιόδου* (Athens, 1975); Sodini, "Artisanat urbain"; H. von Petrikovitz, "Die Spezialisierung des römischen Handwerks II (Spätantike)," *ZpapEpig* 43 (1981): 285–306; Bagnall, *Egypt*, 78–92.

¹⁸⁰ C. Foss, *Nicaea: A Byzantine Capital and Its Praises* (Brookline, Mass., 1996), 16 n. 17.

¹⁸¹ A. Ntina, "Επιτύμβιες ενεπίγραφες στήλες παλαιοχριστιανικής εποχής από τις Φθιώτιδες Θήβες (Νέας Αγχιάλου)," *Διεθνές Συνέδριο για την Αρχαία Θεσσαλία στη μνήμη του Δ. Π. Θεοχάρη* (Athens, 1992), 452.

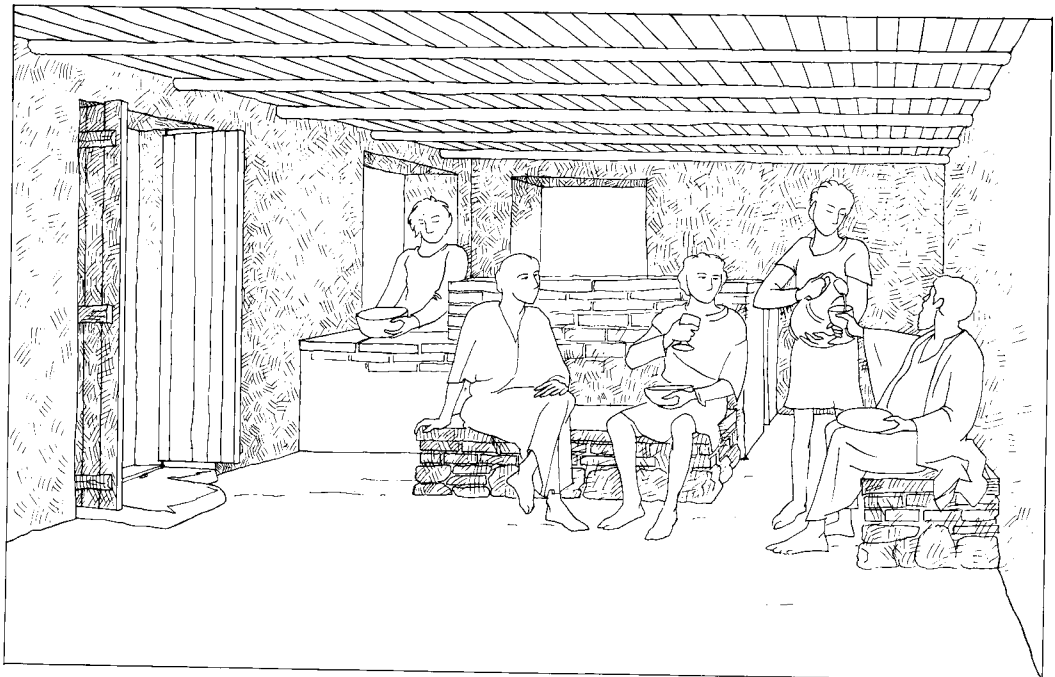
¹⁸² J. S. Crawford, *The Byzantine Shops at Sardis* (Cambridge, Mass., 1990), W1–W3, E1–2.

¹⁸³ For Cilicia and northern Syria, Sodini, "Artisanat urbain," 76; Tate, *Campaignes*, 249–51, and G. Tate, "Les métiers dans les villages de Syrie du Nord," *Ktema* 16 (1995): 73–78; Feissel and Fourdrin, "Une porte urbaine."

¹⁸⁴ Regarding quarries, see Sodini, "Marble and Stoneworking in Byzantium," 125–31.



5. Map of a Byzantine village near Osmaniye (after K. Hattersley-Smith and V. Ruggieri, S. J., "A Byzantine City near Osmaniye (Dalaman) in Turkey: A Preliminary Report," *OCP* 56 [1990]: 135-64, fig. 1)



6. Reconstruction of the interior of a tavern at Sardis (after J. S. Crawford, *The Byzantine Shops at Sardis* [Cambridge, Mass., 1990], fig. 35; drawing by Elizabeth Wahle)



7. Inscription from Anazarbos (after G. Dagron, in G. Dagron and D. Feissel, *Inscriptions de Cilicie* [Paris, 1987], no. 108, pp. 170–85, pl. 45)

activities ranged from quarrying to sculpture), brickmakers,¹⁸⁵ masons, specialists in stone facing and *opus sectile*, and mosaicists (whose signatures often appear in the Near East in paving inscriptions),¹⁸⁶ specialists in surfacing (plasterers), and, at the head of all these trades, entrepreneurs and architects.¹⁸⁷ The famous agreement of 459 ratified at Sardis between the guild of masons and their employers demonstrates the ability of the guild to negotiate with its employers (in particular through recourse to strikes) and to represent the profession as a whole, as well as the existence of a strained labor market in which specialized personnel were sought after.¹⁸⁸

Pottery held an exceptional place in the economy of the sixth century;¹⁸⁹ it has been recovered in large quantity by archaeologists, and it functioned, in the case of amphoras, as packaging. The typology of Byzantine pottery has long been established, and the determination of its various places of origin has made great progress, as has its dating, permitting us to evaluate the level of commercial exchanges.¹⁹⁰ The quantities recovered represent but a small proportion of the quantities produced. Significant production areas were North Africa, Attica and Corinth, Moesia, the western coast of Asia Minor (the areas around Pergamon, Phokaia, the peninsula of Cnidus), Sagalassos, the Cilician coasts, the regions of Antioch and Cyprus, Galilee and the northern part of Samaria, the regions of Gaza and of Ascalon, and Egypt.¹⁹¹ The production of tableware, like that of amphoras, took place on a regional scale and was rarely concentrated in a specific site. The presence of kilns maintained this production outside cities, as did, undoubtedly, the need for easy access to combustible materials. The manufacture of amphoras, for reasons of profitability, must have occurred near locations at which foodstuffs were produced (principally wine, oil, and *garum*).¹⁹² In North Africa, it seems to have been associated with large landholdings and allied to the production of table-

¹⁸⁵ The bibliography in Sodini, "Artisanat urbain," 73–75, should be supplemented with that of J. Bardill, "A Catalogue of Stamped Bricks," *Anatolian Archaeology* 1 (1995): 28–29.

¹⁸⁶ P. Asemakopoulou-Atzaka, *Tò ἐπάγγελμα τοῦ ψηφοθέτη κατὰ τὴν ὀψιμὴ ἀρχαϊότητα* (3ος–7ος αἰώνας) (Athens, 1993); see also F. Alpi, "Les inscriptions de l'église d' 'Ain Fattir," *RevBibl* 99 (1992): 435–39 (the mosaicists Klaudianos and Immanuel), and D. Feissel, "Bulletin épigraphique," *REG* 105 (1992): no. 644 (the mosaicist Thomas).

¹⁸⁷ K. Kretikekou, "Μνείες οικοδομικῶν επαγγελματιῶν στις επιγραφές της ρωμαϊκῆς-παλαιохριστιανικῆς Παλαιστίνης καὶ Αραβίας," *Μελετήματα* 10 Ποικίλα (Athens, 1990): 373–94.

¹⁸⁸ Foss, *Sardis*, 19–20, inscription 14 (lines 110–13); P. Garnsey, "Les travailleurs du bâtiment de Sardes et l'économie urbaine du Bas-Empire," in *L'origine des richesses dépensées dans la ville antique*, ed. P. Leveau (Aix-en-Provence, 1988), 147–60.

¹⁸⁹ J. W. Hayes, *Excavations at Sarachane in Istanbul*, vol. 2 (Princeton, N.J.–Washington, D.C., 1992), 3–212, is the basic text; for supplementary bibliography, see Sodini, "Artisanat urbain," 80–85; idem, "La contribution de l'archéologie," 173–79.

¹⁹⁰ See V. François and J.-M. Spieser, "Pottery and Glass in Byzantium," *EHB* 586–97.

¹⁹¹ C. Panella, "Merci e scambi nel Mediterraneo tardoantico," in Carandini, Cracco Ruggini, and Giardina, *Storia di Roma* (as above, note 10) 3.2:613–97; for North Africa, see S. Tortorella, "La ceramica africana: Un bilancio dell'ultimo decennio di ricerca," in *Productions et exportations africaines: Actualités archéologiques*, ed. P. Troussset (Paris, 1995), 79–102.

¹⁹² On the importance of *garum* in the economy of North Africa during late antiquity, see N. Ben Lazreg et al., "Production et commercialisation des *salsamenta* de l'Afrique Ancienne," in Troussset, *Productions et exportations africaines* (as above, note 191), 103–42.

ware and lamps. Such was the case in any event, according to Michael Mackensen, at El-Mahrine and Henchir el Biar: the workshops were probably owned by a *possessor fundi*, while the potters were the *conductores* of their workshops.¹⁹³ There is evidence for such an arrangement in third-century Egypt, where contracts between large land-owners and amphora manufacturers have been preserved,¹⁹⁴ and where large factories dating from the second to the fourth centuries have been found, together with associated presses and kilns near Lake Maryut.¹⁹⁵ Nonetheless, the production of tableware could be a separate activity. In the region of Gaza and Ascalon, workshops located around villages and hamlets produced amphoras exclusively.¹⁹⁶ The most impressive kilns are those that have been found in the agricultural complex located to the north of Ascalon: the relation in this case between large estate and amphora production was very close.¹⁹⁷ At Sagalassos, the potters' quarter was located northeast of the city; its production was diversified (cups, bowls, plates, but also open and covered vessels).¹⁹⁸ Secondary centers appeared around the sixth century, producing a painted tableware (in Gerasa, possibly Nea Anchialos, Gortyna, and Egypt).

Greek molded lamps have a curious history. Corinth launched a spectacular production in the second century, with potters who signed their pieces. It was quickly imitated by Athens, which dominated the market in the fourth century. By the middle of the fifth century, the rivalry between the two centers came into resurgence; neither was a producer strictly speaking, but rather thrived in creating counterfeits and systematic adaptations of cast pieces, in particular lamps from North Africa. These phenomena multiplied in secondary centers.¹⁹⁹ In the course of the sixth century, pottery workshops with small facilities proliferated within the centers of abandoned cities (Delphi, Utina), but we are not able to fathom the reasons for this phenomenon. The same holds true at Gerasa and at Aqaba under Umayyad domination.

The work of potters from this period, except for certain Attic lamps (from the workshops of Chione and Sotiria until the beginning of the 6th century) and lamps from the Near East (6th and 7th centuries), is anonymous or marked by a few plain stamps. Amphoras tend to bear indications of the contents, the quantity of products trans-

¹⁹³ M. Mackensen, *Die Spätantiken Sigillata- und Lampentöpfereien von el Mahrine (Nordtunesien)* (Munich, 1993).

¹⁹⁴ H. Cockle, "Pottery Manufacture in Roman Egypt," *JRS* 71 (1981): 87–97.

¹⁹⁵ J.-Y. Empereur, "La production viticole en Égypte," in Amouretti and Brun, *La production du vin et de l'huile* (as above, note 142), 39–47.

¹⁹⁶ Y. Israel, "Survey of Pottery Workshops, Nahal Lakhish-Nahal Besor," *Excavations and Surveys in Israel* 13 (1993 [1995]): 106–7. Somewhat more to the north of Ascalon, an early Byzantine kiln has also been found, although its specific products have not been determined: Y. Levy, "Tel Yavne (South), Kiln," *Excavations and Surveys in Israel* 12 (1993 [1994]) (references provided by Y. Hirschfeld).

¹⁹⁷ Y. Israel, "Ashqelon," *Excavations and Surveys in Israel* 13 (1993 [1995]): 100–105.

¹⁹⁸ Waelkens, *Sagalassos I* (as above, note 115), 113–69; Waelkens and Poblome, *Sagalassos II*, 149–227; idem, *Sagalassos III*, 177–270; J. Poblome, *Sagalassos Red Slip Ware* (Turnhout, 1998).

¹⁹⁹ B. Lindros Wohl, "Lamps from the Excavations at Isthmia by UCLA," in *The Corinthia in the Roman Period*, ed. T. E. Gregory, (Ann Arbor, Mich., 1993), 130–38; A. Karivieri, *The Athenian Lamp Industry in Late Antiquity* (Helsinki, 1996).

ported, and the name of their owner. Only one signature is known, on a jar; it seems to be humoristic, the potter being designated by the surname Πυλοφάγος (clay-eater).²⁰⁰

Glassmaking grew rapidly as the result of the dissemination of the technique of glass-blowing during the early Byzantine period.²⁰¹ It played a role in fenestration, which developed in churches in particular, in lighting (the hanging lamps or bowls of the *polykandela* and standing lamps), and in dishes, where it inspired certain types of ceramics. The major regions in which glass has been found, and undoubtedly was produced, are Egypt,²⁰² the provinces of Palestine (where two glass factories have been found),²⁰³ Transjordan and the Hauran,²⁰⁴ undoubtedly Phoenicia (Tyre in particular), the Syrian coast (?), Cilicia,²⁰⁵ the region of Sardis,²⁰⁶ Constantinople,²⁰⁷ and the Crimea.²⁰⁸ Glassworking developed in parallel between Mediterranean Europe and the Near East, although the precise relations between the two regions remain unclear.

Textile work was one of the most important commercial activities of antiquity.²⁰⁹ It was carried out in both imperial and private workshops. With respect to the first, notable factories included the linen mills (*liniphia*) of Scythopolis, wool mills (*gynaecaea*) in Herakleia of Thrace, Kyzikos, and Caesarea in Cappadocia, and dyeworks in Cyprus and Phoenicia (at Tyre one-fifth of the trade names relate to purple dye). The English excavation team at Carthage has recently proposed an identification of the imperial *gynaecium* of Carthage known to us through the *Notitia Dignitatum* and the *Theodosian Code* with buildings discovered in the circular harbor;²¹⁰ the concentration of artisanal workshops is, in any event, testimony to the importance of textile work in this region.

²⁰⁰ Plotinopolis (Didymoticho): M. Sève, "Bulletin épigraphique," *REG* 107 (1994): 502 (no. 166) (Πυλοφάγος κυθοπλάστης ἔγραψεν [sic]).

²⁰¹ Sodini, "Artisanat urbain," 92–94; idem, "La contribution de l'archéologie," 179–80.

²⁰² Bagnall, *Egypt*, 85; E. L. Higashi, "Conical Glass Vessels from Karanis: Function and Meaning in a Pagan/Christian Context in Rural Egypt" (Ph.D. diss., University of Michigan, Ann Arbor, 1990). Regarding glass in Alexandria, C. Haas, *Alexandria in Late Antiquity: Topography and Social Conflict* (Baltimore, Md., 1997), 33–34, 193, 198.

²⁰³ Jalame: G. Davidson Weinberg, *Excavations at Jalame, Site of a Glass Factory in Late Roman Palestine* (Columbia, Mo., 1988); Hadera (near the coast, to the south of Dor): Y. Gorin-Roser, "Hadera, Bet Eli'ezer," *Excavations and Surveys in Israel* 13 (1993 [1995]): 42–43. Others have been previously identified in Sodini, "Artisanat urbain," 167 n. 205.

²⁰⁴ O. Dussart, "Les verres de Jordanie et de Syrie du Sud du IV^e au VII^e siècle," in *Le verre de l'Antiquité tardive et du Haut Moyen Age: Typologie chronologie, diffusion*, ed. D. Foy (Guiry-en-Vexin, 1995), 343–59.

²⁰⁵ E. M. P. Stern, "The Production of Glass Vessels in Roman Cilicia," *Kölner Jahrbuch zu Vor- und Frühgeschichte* 22 (1989): 121–28, mistakenly confounds *itrarius* (pastrycook) with *vetrarius*. For glass-makers' kilns at Anamur, Sodini, "Artisanat urbain," 167 n. 204.

²⁰⁶ Crawford, *Shops*, E12–E13 (the inventory yields 10% window glass; 90% glass vessels); A. von Saldern, *Ancient and Byzantine Glass from Sardis* (Cambridge, Mass., 1980).

²⁰⁷ Hayes, *Saracene*, 399–402.

²⁰⁸ Y. Ivachenko, "Le verre proto-byzantin, recherches en Russie (1980–1990)," in Foy, *Le verre de l'Antiquité tardive* (as above, note 204), 319–30, and A. Sazanov, "Verres à décor de pastilles bleues provenant des fouilles de la Mer Noire: Typologie et chronologie," *ibid.*, 331–41.

²⁰⁹ Sodini, "Artisanat urbain," 90–92 and 103; A. Avraméa, "Artisanat et commerce du textile dans le Bas-Empire oriental (IV^e–VII^e siècles)," in *Cultural and Commercial Exchanges between the Orient and the Greek World* (Athens, 1991), 23–29.

²¹⁰ Hurst, *Excavations at Carthage*, 64–98.

Wool and linen were the main textiles, but hemp was also used extensively. The uses of textiles (in clothing, hangings, rugs, upholstery, nautical ropes, sails) and the techniques associated with textile manufacture (carding, weaving, dyeing) required the use of highly specialized artisans. The workshops of Sardis were by and large dye-works. Egypt occupied a distinguished place among the producer regions on the evidence of the important samples that have come down to us.²¹¹ Silk posed a particular problem, insofar as it was not manufactured within the empire until the Justinianic period and was thus the object of a highly regulated trade with the Sasanians, supervised by imperial functionaries.²¹²

There is ample evidence of woodworking (carpentry, shipbuilding, joinery, and basketmaking), crafts associated with hides (leatherwork, the preparation of fur, shoemaking, clothing manufacture, and the manufacture of parchment), as well as work in bone, ivory, and wax.²¹³ The most important manufacturing sector, however, was metalwork, which comprised two highly differentiated sectors: work in base metals on the one hand, and, on the other, work in precious metals. The first included artisans who worked iron, copper alloys, lead, and tin, and it brought into play a vast production that included a variety of objects: nails, clamps, keys, tools of every sort, utensils, and weapons, which might be manufactured in the imperial *fabricae* (Sardis, Concordia, Antioch, Caesarea), as well as by private entities,²¹⁴ and made use of precious metals and leather. Weaponry, like military dress, made a strong impression on the “barbarian” populations and was widely imitated. These trades were carried out by simple artisans, such as the Cilician blacksmith mentioned in the *Miracles* of St. Artemios.²¹⁵ Work in precious metals—silver and gold—brought wealthy and influential guilds into the manufacturing process, and, given the primary materials involved, they handled substantial amounts of capital. Here again, church treasuries emphasize the wealth of the sixth century, both in the East and in Constantinople itself. Court ceremony favored the production of a very high level of goldsmithing that combined gold, precious stones, pearls, and enamels.²¹⁶ The system of hallmarks underlined the state’s interest in controlling the flow of silver. Gold, the preeminent monetary substance, must have been regulated even more closely. The wealth of goldsmiths (*chrysochooi*) could trans-

²¹¹ Bagnall, *Egypt*, 82–84 (in which most of the sources cited date to the 4th or 5th century). On groups of Coptic textiles, many of which date to the 6th and 7th centuries, see the summary bibliography in Sodini, “La contribution de l’archéologie,” 180–81.

²¹² N. Oikonomides, “Silk Trade and Production in Byzantium from the Sixth to the Ninth Century: The Seals of Kommerkiarioi,” *DOP* 40 (1986): 33–53, and idem, “The Role of the Byzantine State in the Economy,” *EHB* 962. On the silk textiles themselves, see A. Muthesius, “Essential Processes, Looms, and Technical Aspects of the Production of Silk,” *EHB* 146ff.

²¹³ Sodini, “La contribution de l’archéologie,” 165–72; Bagnall, *Egypt*, 84.

²¹⁴ Such as the one managed by Thalassius, the friend of Libanios: G. Dagron, *Naissance d’une capitale: Constantinople et ses institutions de 330 à 451* (Paris, 1974), 132.

²¹⁵ Sodini, “Artisanat urbain,” 85–86, 101–2; J. C. Waldbaum, *Metalwork from Sardis: The Finds through 1974* (Cambridge, Mass., 1983). Aphrodisias yields a new term to designate the workshop of a blacksmith (μυδροστασία): Roueché, *Aphrodisias*, no. 208.

²¹⁶ Sodini, “Artisanat urbain,” 85–86, and “La contribution de l’archéologie,” 170–171; and more recently, Boyd and Mango, *Ecclesiastical Silver Plate*; for a summary of the latter, see Morrisson, “Trésors d’argenterie,” 539–48.

form them into money changers (*collectarii*, *trapezitai*) and subsequently bankers (*aurarii*, *argyropratai*), following a hierarchy suggested by Charlotte Roueché.²¹⁷ They might then figure in the collection of taxes and have access to public funds over which they could exercise control. There is abundant testimony to the rise in the power of these guilds during the reign of Justinian. We cannot rule out the possibility that the banker Julianus had been a Byzantine agent. At Bostra, three inscriptions show *chrysochooi* supervising the utilization of public funds (*demotika*). At Scythopolis, a goldsmith became a *palatinus*, and Peter Barsymes, a money changer, became praetorian prefect under Justinian.

Trade: Textual and Archaeological Evidence

Trade in the abovementioned agricultural and Byzantine artisanal products, whose density within the *metrokomiai* we have glimpsed on a local level, remained active during a large part of the sixth century, albeit on a more modest scale than during the preceding centuries. Until the 1970s and even the 1980s, our knowledge of these exchanges for the most part relied on the testimony of texts; it has since benefited from the contributions of archaeology and, in particular, from the study of pottery finds.²¹⁸ The interpretation and comparative analysis of this evidence is, to be a sure, a delicate task; and ensuring consistency in materials classification, the stratigraphy of the physical context, and statistical methodology are not unproblematic.²¹⁹ While we must guard against imbuing them with absolute value, such data nonetheless yield invaluable quantitative information regarding the geographic directions of commercial exchange and their evolution relative to one another. This documentation nonetheless remains incomplete for two reasons: on the one hand, it is limited to products that were transported as commodities in and of themselves (tableware or cooking ware) or products whose transport required the use of ceramic containers (amphoras or jars): liquids (oil, wine), semiliquids (salted foods, condiments such as *garum*),²²⁰ and, occasionally, dried fruit or pulses. A foodstuff as essential as wheat, by contrast, would leave no direct traces (or nearly none); wine as well, possibly as early as the sixth century,

²¹⁷ C. Roueché, "Aurarii in the Auditoria," *ZPapEpig* 105 (1995): 37–50. The examples that follow are drawn from this study. J. Gasco (Antiquité tardive 5 [1997]: 376) has, however, challenged the meaning of *aurarii* mentioned in the circuses and theaters; rather than bankers, could they be *favisores* (clappers)? A preferable recent hypothesis considers them to be financial managers of circus games. The term is not attested in any other context. See C. Zuckerman, "Le cirque, l'argent et le peuple. A propos d'une inscription du Bas-Empire," *REB* 58 (2000): 69–96, esp. 73–78. See also G. Dagron, "The Urban Economy, Seventh–Twelfth Centuries," *EHB* 427–30.

²¹⁸ Panella, "Merci e scambi."

²¹⁹ C. Panella, "Le merci: Produzione, itinerati e destini," in *Società romana e impero tardoantico*, ed. A. Giardina (Rome, 1986), 3:21–23, 431–59; for a state of the art, see J. Keay and C. Abadie-Reynal, "A propos des Actes du Colloque de Sienne, 1986: Amphores romaines et histoire économique," *JRA* 5 (1992): 353–66; M. Bonifay and D. Piéri, "Amphores du Ve au VIIe s. à Marseille: Nouvelles données sur la typologie et le contenu," *JRA* 8 (1995): 94–120.

²²⁰ The importance of North Africa in this sector has recently been emphasized: Ben Lazreg et al., "Production et commercialisation."

began to be transported in barrels. On the other hand, the documentation available to us for the most part concerns maritime exchange.

Maritime trade had the advantage of a much lower cost than land exchange, a fact that has often been emphasized with respect to cereal products (Jones reckons it from seventeen to twenty-two times lower). It would nonetheless be erroneous to minimize the role of land transport: the differential was less significant for high-value products of a weight or volume analogous to wheat that could travel over short distances in containers lighter than amphoras (among others)²²¹ and thus justified not only the shipment of silk or spices by land, but other products as well. Antioch thus tapped products from a hinterland that was not limited solely to the Orontes valley, but extended as far as Melitene, Chalcis, and Edessa; the city maintained reciprocal relations with the rural areas of Cilicia and northern Syria, providing textiles, tools, and other manufactured products—African Sigillata ware, for example—in exchange for foodstuffs or timber.²²² A portion of this merchandise was reshipped by way of Antioch's large-scale trade; the remainder constituted local commerce.

This trade may be glimpsed through the evidence of a few inscriptions, regrettably mutilated, such as the municipal tariffs of Anazarbos and Cagliari²²³ (Fig. 7). The first, which dates from the mid-fifth to the mid-sixth century, taxes the following products: saffron, *garum*, ropes, gourds (? *khouzia*), fenugreek (*karphion*, a pulse), garlic, fried foods (fish), wine, salt, grafted plants, raw silk, tin, lead, slaves, cattle, *caroubes* (pulses in general?). The second, dating to the reign of Maurice, mentions palms (*sparta*), sheep (for butchering, taxed in pounds of meat), vegetables (*olera*), "summer produce" (*extibalia*), wine, wheat, and "birds" (*abis*). Without attempting to draw conclusions as to chronology from the comparison of these two fragmentary pieces of evidence, one may distinguish Anazarbos—clearly more important and active, stocking not only foodstuffs, but also luxury products (silk) and raw materials for artisan work and even reexport—from Cagliari, which took in food solely for the town itself, as well as palms to weave baskets, sandals, and roofing materials. To a certain degree, one may also distinguish the reference in the Nessana papyri of a total indicative of a sizable transaction (270.5 solidi repaid to some merchants by one Father Martyrius) from other, more local transactions, none of which exceeds 10 solidi (the purchases of camels and donkeys valued at 2½ to 8 solidi, and the purchase of a slave for 3 solidi).

Medium- and long-distance maritime trade benefited from a port infrastructure,

²²¹ A. H. M. Jones, *The Later Roman Empire (284–602)* (Oxford, 1964), 841–42. D. J. Mattingly, "Oil for Export? A Comparison of Libyan, Spanish and Tunisian Olive Oil Production in the Roman Empire," *JRA* 1 (1988): 33–57, at 52, citing K. Greene, *Archaeology of the Roman Economy* (Berkeley, 1986), 35–43.

²²² Liebeschuetz, *Antioch*, 61–100; J.-P. Sodini, "Villes et campagnes en Syrie du Nord: Échanges et diffusion des produits d'après les témoignages archéologiques," in *Models of Regional Economies in Antiquity and the Middle Ages to the 11th Century*, ed. E. Aerts, J. Andreau, and P. Ørsted (Louvain, 1990), 72–83.

²²³ Anazarbos: G. Dagron, in G. Dagron and D. Feissel, *Inscriptions de Cilicie* (Paris, 1987), no. 108, pp. 170–85; J. Durliat, "Taxes sur l'entrée des marchandises dans la cité de Carales-Cagliari à l'époque byzantine," *DOP* 36 (1982): 1–14.

the maintenance or restoration of which in the course of the sixth century reflects its endurance and vitality, albeit unequally distributed, given that the eastern Mediterranean was clearly the better endowed in this regard. With the construction on the Propontis of the harbor of Julian and subsequently the harbor of Theodosios and its associated granaries, Constantinople witnessed a remarkable growth during the fourth and fifth centuries in the capacity of its harbors, previously limited to the two natural ones on the Golden Horn. In total, the city had some 4 km of quays that could accommodate the simultaneous docking of five hundred mid-sized ships.²²⁴ Recent excavations at Caesarea have similarly demonstrated the vast size of early Byzantine granaries (Fig. 8). Nor should we minimize the role of docking facilities within the eastern Mediterranean, for example, the ports of Cyprus (Paphos), Crete, and Rhodes, where the governor of the province of the islands had his seat. Each had its own docks or harbors, in some cases specialized ones, such as the harbor at Thasos, which was fitted with cranes to load marble onto ships.²²⁵ Antioch was accessible through a navigable channel that was maintained along the Orontes River. To the north of the channel, the port of Seleucia Pieria, according to an inscription, accommodated ships coming not only from Phoenicia, Cyprus, and Cilicia, but also from Palestine and Egypt.²²⁶ Laodicea in Syria, Tyre, Dor, and Gaza, and especially Caesarea, restored, according to Prokopios, by Anastasios I (491–518), were still active export centers. Alexandria—the annony port for Constantinople and the outlet for the eastern spice trade—seems to have maintained two large docks dating from Hellenistic times. The fate of Carthage’s port was altogether different; recent excavations have confirmed the abandonment of the circular harbor during the Vandal period, as well as Prokopios’ description of buildings, already mentioned above (*stoai*, linked perhaps with the *annona* or the imperial *gynaecium*), reconstructed on the Island of the Admiralty under Justinian (*De aedificiis* 6.5.10). The harbor was subsequently put back into service, although on a reduced scale, and new, smaller quays were probably constructed on either side. The quay of the hexagonal port was raised during the fifth and sixth centuries because of the rising sea level; it had ceased to function by the end of the sixth century.²²⁷ Of Rome’s two ports, Ostia declined to the benefit of Portus, which was subsequently fortified, but much diminished relative to what it had been during the second century. According to Prokopios, merchandise was transported to Rome from Portus, either by road or along

²²⁴ Mango, *Développement urbain*, 38.

²²⁵ J.-P. Sodini, A. Lambraki, and T. Kozelj, *Les carrières de marbre à l’époque paléochrétienne* (Paris, 1980), 119–22.

²²⁶ G. Dagron, “Un tarif de sportules à payer aux *curiosi* du port de Séleucie de Piérie (VI^e siècle),” *TM* 9 (1985): 437–38.

²²⁷ Caesarea: A. Raban, “The Inner Harbour Basin of Caesarea: Archeological Evidence for Its Gradual Demise,” in *Caesarea Maritima: A Retrospective after Two Millennia*, ed. A. Raban and K. Holum (Leiden–New York, 1996), 628–66; Prokopios of Gaza, *Panegyricus in Imperatorem Anastasium*, PG 87.3:2817; Dor: S. A. Kingsley and K. Raveh, “Stone Anchors from Byzantine Contexts in Dor Harbour, Israël,” *International Journal of Nautical Archaeology* 23.1 (1994): 1–12; Carthage: Hurst, *Excavations at Carthage*, and idem in *Pour sauver Carthage: Exploration et conservation de la cité punique, romaine et byzantine*, ed. A. Ennabli (Paris, 1992), 76–78, 88–89.

the Tiber on barges towed by oxen (*Bell. Goth.* 1.26).²²⁸ The harbor of Naples was also fortified through its inclusion in the surrounding walls of the enlarged city around the year 440 and again around 556, a fact that does not allow us necessarily to conclude that the city's population grew. At Ravenna,²²⁹ the silting and shifting of the mouth of the lagoon led to the construction of the *novus portus* of Classe, from which Belisarios sent ships loaded with grain and other foodstuffs (*Bell. Goth.* 2.29.311).²³⁰

With the exception of Constantinople, Byzantine harbors were universally of smaller capacity than harbors of the early Roman Empire, even of those of the fourth century; ships as well were built on a more modest scale. The decline was substantial. In the course of the fifth century, ships of increasingly small tonnage were requisitioned: 2,000 modioi (approximately 12 tons burden) in 439 in a novel repeated in the Justinianic Code and even 1,000 modioi (8 metric tons or 6 tons burden) in a novel of Valentinian III, as opposed to 50,000 modioi in the second century. The limit undoubtedly sought also to stem the flight from fiscal duties and was precisely equivalent to that assigned to the *curiosi* of Seleucia for the payment of *sportulae*. This capacity is a fifth of that of the Yassı Ada shipwreck (40 tons). Although a few large-capacity vessels continued to sail in the eastern portion of the empire (the shipwreck of Marzamemi transporting 200–400 tons of Proconnesian marble and the Alexandrian vessels with a capacity of 70,000 and 20,000 modioi [560 and 160 tons]), ships of small or medium tonnage were the rule in the West, such as the ships of 2,800-modioi capacity sent by Theodoric in search of wheat and *vectigal* in Spain.²³¹

Constantinople was clearly the crux of most of the empire's trade relations, and the sixth century marked the endpoint of an evolution that was set into motion by the creation of a new capital, to the detriment of Rome. The provisioning of an abundant population,²³² on the order of a half million inhabitants, depended not only on a nearby hinterland for fish or fresh vegetables, or a somewhat more distant one for meat, but also on sources that were at a far greater remove for other basic foodstuffs. The 8 million artabas of wheat that came from Egypt met the city's basic grain requirements and were supplemented by supplies from Thrace and, after 533 or even earlier, wheat from Africa, as demonstrated by the famine that arose in Constantinople as a result of the blockage of "African ships" during Herakleios' revolt in 608. Sicily also played a role in provisioning, as suggested by the episode of the ships diverted toward Thessalonike by the miraculous intervention of St. Demetrios and by the fact that the

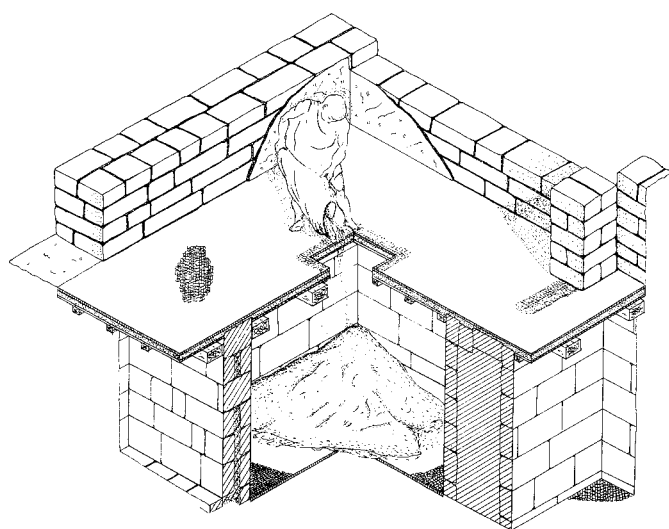
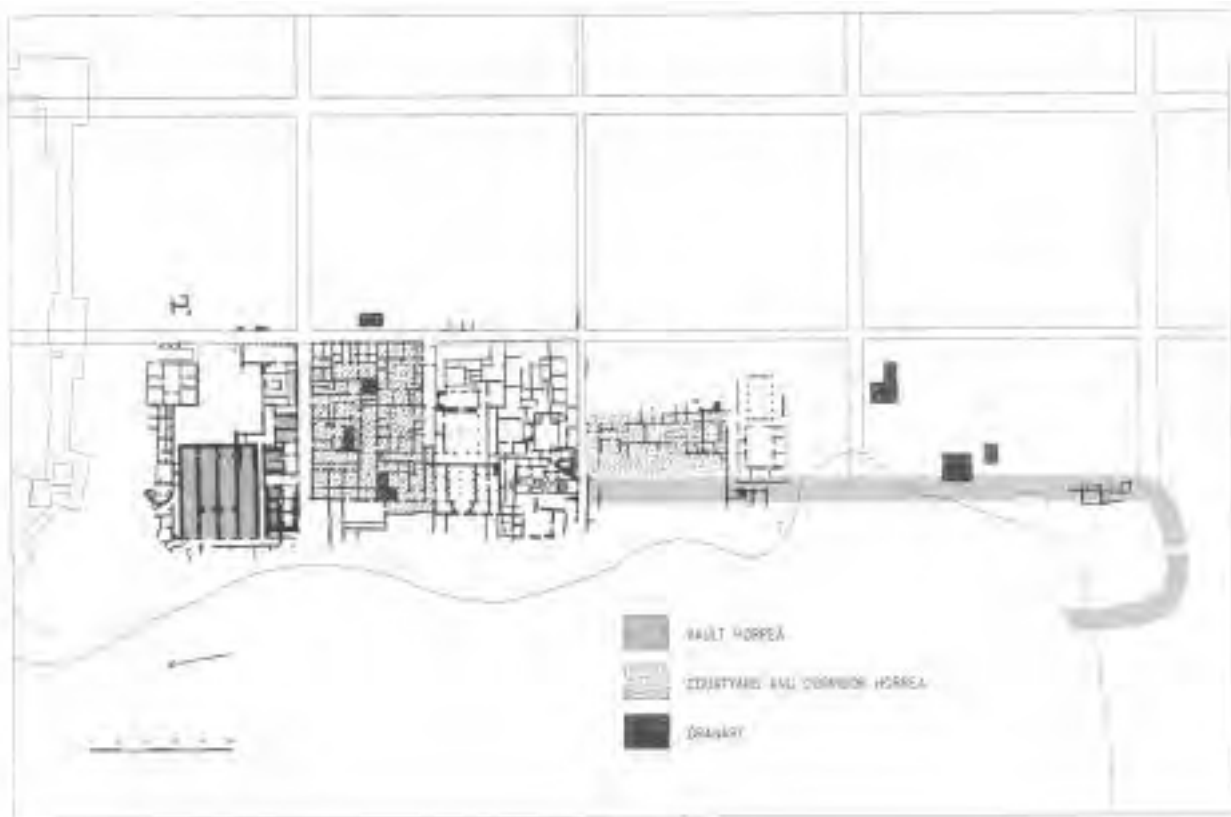
²²⁸ See the very recent contributions of Paroli et al., *La storia economica di Roma nell'alto medioevo*.

²²⁹ P. Arthur, "Naples: Note on the Economy of a Dark Age City," in *Papers in Italian Archaeology IV: The Cambridge Conference*, ed. C. Malone and S. Stoddart (Oxford, 1985), 4:247–59.

²³⁰ M. G. Maioli in *Ravenna e il porto di Classe: Venti anni di ricerche archeologiche tra Ravenna e Classe*, ed. G. Bermond Montanari (Bologna, 1983), 65–78.

²³¹ Cassiodorus, *Variae*, 5.36 cited by J. Rougé, "Quelques aspects de la navigation en Méditerranée au Ve s. et dans la première moitié du VIe s.," *CahHist* 6 (1961): 129–54, at 144–46.

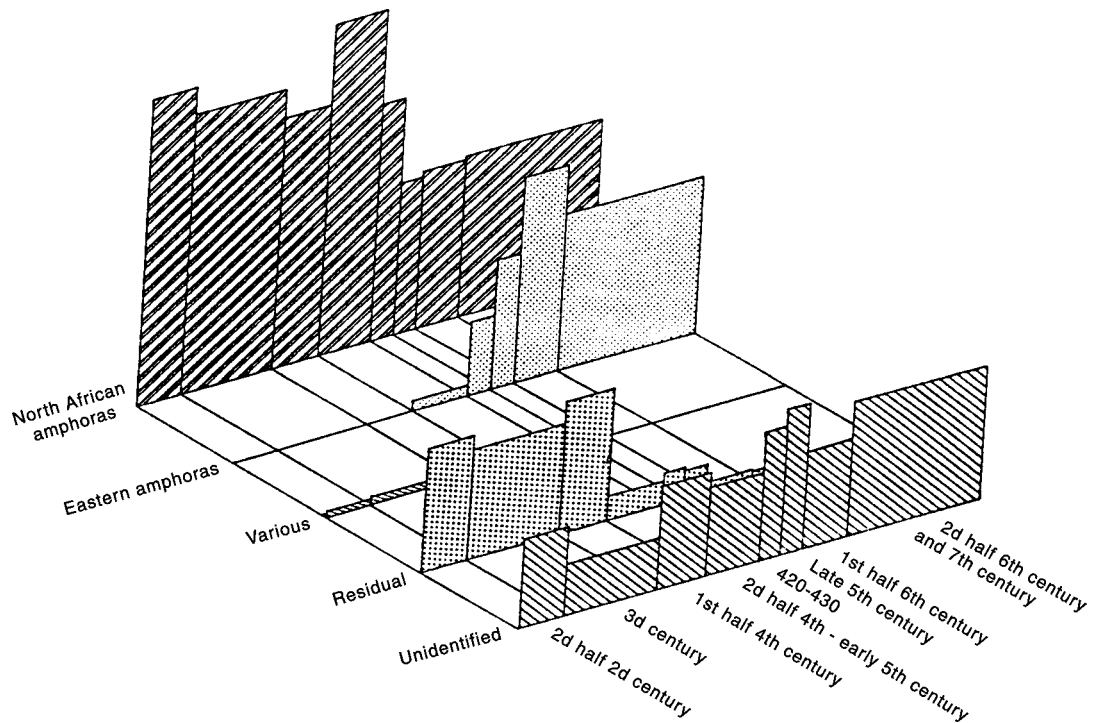
²³² On provisioning, see herein Dagron, "Urban Economy," 437ff, and the bibliography cited. See also Sirks, *Food for Rome*; idem, "The Size of the Grain Distribution in Imperial Rome and Constantinople," *Athaeneum* 79 (1991): 215–37.



0 0.5 1.0m

Size and shape of the granary

8. Map of storage facilities uncovered south of the Crusader wall and reconstruction of a granary in Caesarea (after J. Patrich, "Warehouse and Granaries in Caesarea Maritima," in *Caesarea Maritima: A Retrospective after Two Millennia*, ed. A. Raban and K. Holum [Leiden–New York, 1996], p. 147, fig 1, and p. 167, fig 21)



9. Chronological distribution of amphora finds in the Italian excavations at Carthage (L. Anselmino, C. Panella, R. S. Valenzani, S. Tortorella, "Cartagine," in A. Giardina, ed., *Società romana e impero tardoantico*, vol. 3, *Le merci, gli insediamenti*, [Rome, 1986], 178, fig. 11)

prefect of Illyricum vainly sought help from the island at the beginning of the seventh century.²³³

Oil and wine came for the most part from Syria or Palestine, a fact evidenced by the pottery of Sarāḡhane, where LRA (Late Roman Amphora) 1 amphoras produced on the Cilician coast, probably in northern Syria, and also in Cyprus, constitute three-quarters of the amphora fragments. Grain, oil, and wine—the only products mentioned in the decree of Abydos, together with dried legumes and salt pork²³⁴—constituted a large portion of the south-to-north exchanges of the eastern Mediterranean and represented the backbone of the Byzantine empire's domestic commerce during the sixth century. The role of the *annona* and the public distributions remains difficult to state precisely; it was determinative according to some (Jean Durliat), less so according to others (V. Sirks and J.-M. Carrié), a position that appears more plausible, all the more since the essential foodstuffs were supplemented by textiles, perfumes, unguents, papyrus, and metal, or wood—raw material for the artisanal industry of the capital.²³⁵

The second commercial route was not entirely secondary: it united Constantinople with “Libya and Italy”—the places of origin of the ships mentioned by Prokopios in connection with the customs stations erected on the Straits (*Anecdota* 25.7–10). The eastern amphoras discovered in excavations at Carthage (Fig. 9) confirm the persistence of these ties. The African route is marked out by finds of high-quality tableware (African Red Slip) made in Africa Proconsularis and lamps from Byzacena. This cargo was shipped together with heavy products and was distributed throughout the East, not only in Constantinople, but also in Asia Minor, in southern Greece, and, possibly to a lesser degree, in the Black Sea region (Fig. 10). While it competed against Phokaian Sigillata ware, which clearly dominated the market in the northern Aegean (80% at Demetrias), in Constantinople, and in Asia Minor, African Red Slip ware assumed an increased importance over the years 500–550 in Argos (in which it constituted 40% of high-quality ware), as well as in Athens, Kenchreai, and Sparta. The distribution of African Red Slip ware also emphasizes the existence of lively east-west relations that, by way of Crete, directly united Africa with the urban centers of Syria-Palestine, Antioch and Caesarea. Phokaian Sigillata ware, by contrast, had a “capillary” distribution, reaching interior territories in Asia Minor, Greece, and the East, a fact that suggests “a small trade in peddling.”²³⁶

Archaeological and numismatic material also maps out the western routes of trade beyond the empire's limits.²³⁷ The Mediterranean was, despite the occasional raids by

²³³ Theophanes, *Chronographia*, ed. C. de Boor, 2 vols. (Leipzig, 1883–85; repr. Hildesheim, 1963), 1:296; Lemerle, *Miracles de Saint Démétrius*, 1: miracle 9, §§ 74–78, pp. 106–7.

²³⁴ Text, translation, and commentary by G. Dagron, in G. Dagron and D. Feissel, “Inscriptions inédites du Musée d’Antioche,” *TM* 9 (1985): 421–61 (app. at 451–55). Analyses of the contents of the amphoras reveal a similar diversity: cereals, wine, oil, honey, dates, and pulses (Hayes, *Sarāḡhane*, 434).

²³⁵ See the survey of the question and Carrié's own position in J.-M. Carrié and A. Roussel, *L'empire romain en mutation des Sévères à Constantin, 192–337* (Paris, 1999), 687–91.

²³⁶ C. Abadie-Reynal, “Céramique et commerce dans le bassin égéen du IV^e au VII^e siècle,” in *Hommes et Richesses* (as above, note 15), 1:143–62.

²³⁷ J.-P. Callu, “I commerci oltre i confini dell'impero,” in Schiavone, *Storia di Roma* (as above, note 68), 487–524.

Vandal pirates, Byzantium's inner sea, and Byzantine trade extended to the west as far as England, and, to the east, reached India by way of the Red Sea, and Central Asia (albeit with greater difficulty) by land. The French shipwrecks at La Palud (Port-Cros) and Saint-Gervais (Fos),²³⁸ like the pottery finds at Marseilles, testify to relations between Gaul and the Byzantine East and Africa. In the excavations at Marseilles, the abundant presence of eastern amphoras declines to 25% at the end of the sixth century and disappears altogether at the end of the seventh, whereas African amphoras, abundant in the fourth century, in the minority in the fifth (20–30%), predominate again (46%) at the end of the sixth century.²³⁹ The distribution of LRA 1 and LRA 4, used in particular for the transport of wine from Laodicea and Gaza, often mentioned by Gregory of Tours, reaches as far as the southwest coast of England and indirectly confirms the famous anecdote of the boat from Alexandria reaching Britain in the Life of St. John the Almsgiver.²⁴⁰

To the east, the Sasanians dominated the gulf²⁴¹ and thus a portion of trade in the Indian Ocean, as well as the principal land itineraries of the Silk Route. We know that exchanges were prohibited outside the customs posts of Nisibis, Callinicum, and Artaxata; this affected trade in silk and other luxury products, such as pearls brought by the son of a wealthy Persian merchant from Rev Ardashir to Nisibis, where he converted and became a monk.²⁴² The maritime route was not entirely controlled, however, and Byzantine, Axumite, or Himyarite merchants reached as far as Taprobane (Ceylon), as Cosmas Indicopleustes recalls in an often cited text, or southern India as attested by the finds of solidi spanning the reigns of Theodosios II to Herakleios. Together with the shipping lanes of the Red Sea, caravan routes uniting southern Arabia with Syria flourished in the sixth century; this trade contributed to the prosperity of all the way stations of the Mediterranean, but in particular Clysma “ubi etiam et de India naves veniunt,”²⁴³ and Adulis, a fact that explains in part at least the conflicts and battles for influence that unfolded during this period between the Axumites, who were supported by Byzantium, and the pro-Sasanian Himyarites.²⁴⁴ The evidence of

²³⁸ See F. van Doorninck, Jr., “Byzantine Shipwrecks,” *EHB*; L. Long and G. Volpe, “Le chargement de l'épave 1 de la Palud (VIe s.) à Port-Cros (Var): Note Préliminaire”, in *Fouilles à Marseille, Les mobiliers* (Ier–VIIe siècles ap. J.-C.) (Aix-en Provence, 1998), 317–342; M.-P. Jézégou, “Le mobilier de l'épave Saint-Gervais 2 (VIIIe s.) à Fos-sur-Mer (B.-du Rh.)”, *ibid.*, 343–51.

²³⁹ Loseby, “Marseille,” recalculating the data published by M. Bonifay, “Observations sur les amphores tardives de Marseille d'après les fouilles de la Bourse, 1980–1984,” *Revue archéologique de Narbonne* 19 (1986): 269–305.

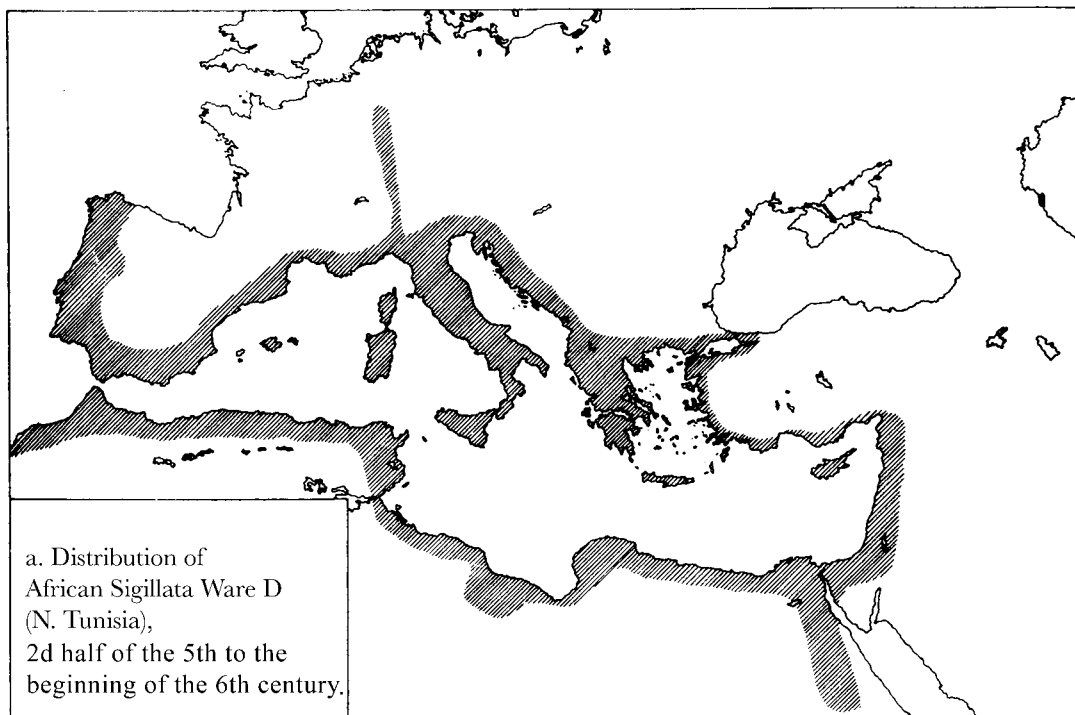
²⁴⁰ C. Thomas, “Tintagel Castle,” *Antiquity* 62 (1988): 421–34; S. Lebecq, “Grégoire de Tours et la vie d'échanges dans la Gaule du VI siècle” in *Grégoire de Tours et l'espace gaulois*, ed. N. Gauthier and H. Galinié (Tours, 1997), 169–76.

²⁴¹ The warehouse of Kane (Bir Ali) on the Strait of Hormuz shipped continuous series of pottery dating from the 1st century C.E. to the 7th century: P. Ballet, “L'Égypte et le commerce de longue distance: Les données céramiques,” *Topoi* 6 (1996): 826–28. Amphoras of type LRA 1 and 4 have been identified, as well as cylindrical African amphoras associated with LRA Sigillata. Amphoras from Ayla (present-day Aqaba) support the argument that it was active as a port until the mid-7th century.

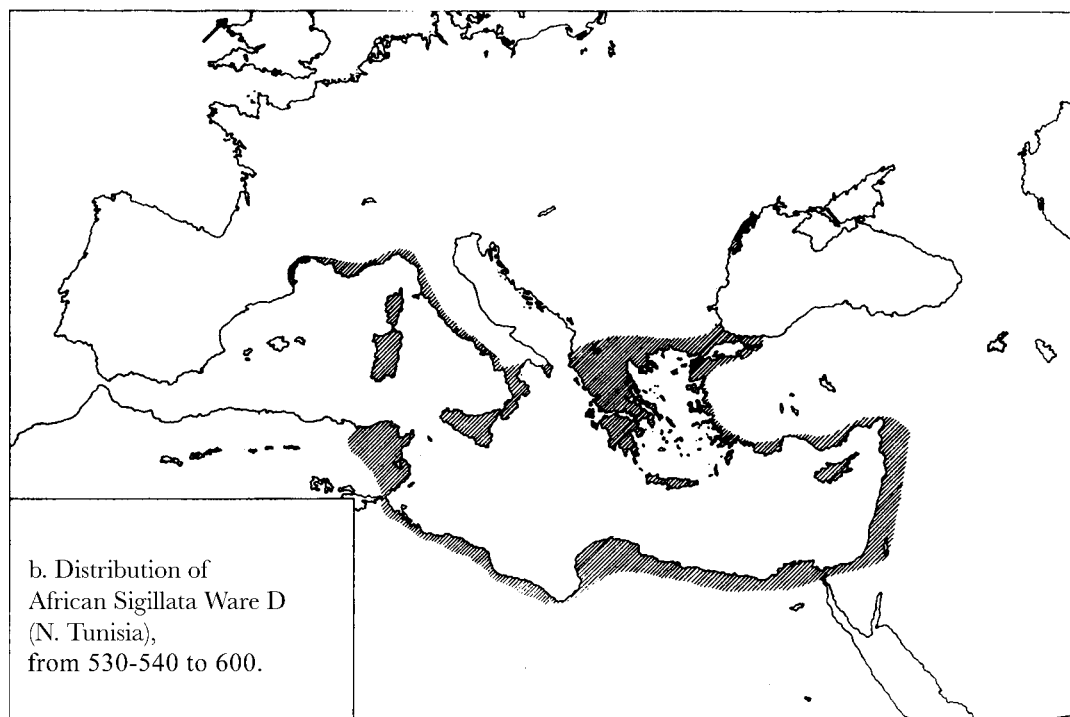
²⁴² J.-B. Chabot, “Le Livre de la chasteté composé par Jésusdenah évêque,” *Mémoires* 16 (1896): 27, 248.

²⁴³ Antoninus Piacentinus (ca. 570), *Corpus Christianorum*, Series Latina 175, A 41, 6, 151.

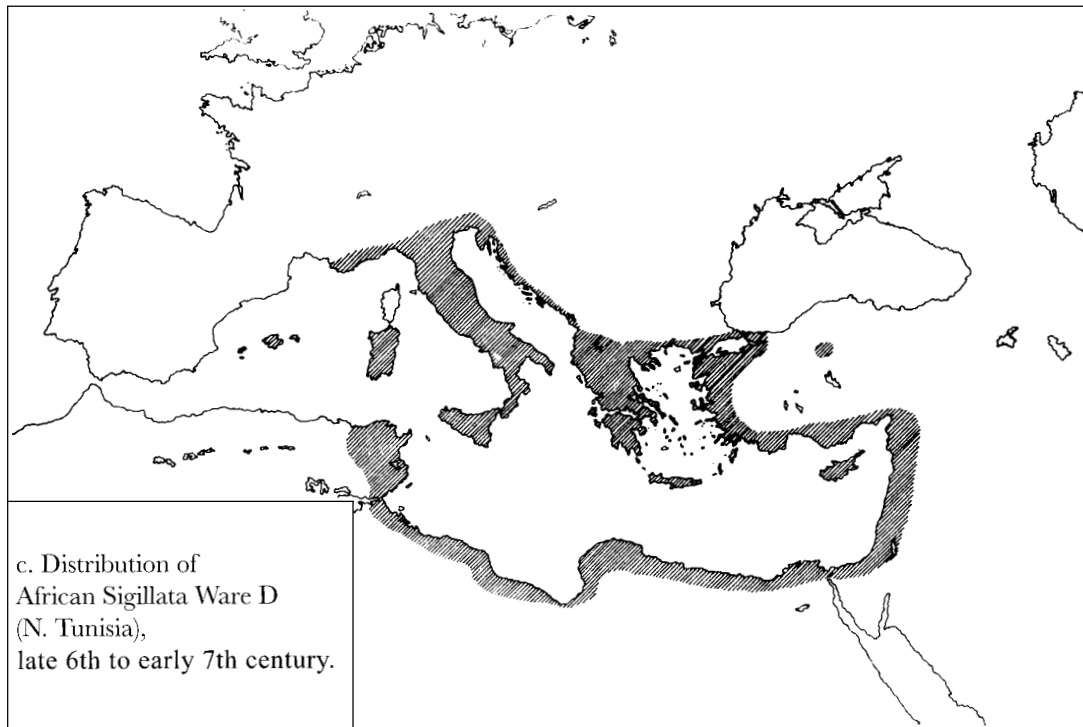
²⁴⁴ For the details, see Callu, “I commercii,” 511–520.



10a



10b



10c

10a–c. Distribution of African Sigillata ware (after S. Tortorella, “La ceramica fine da mense africana dal IV al VII secolo da Cristo,” in *Società romana e impero tardoantico*, vol. 3, *Le merci, gli insediamenti*, ed. A. Giardina [Rome, 1986], 217–19)



Sigillata D from the site of El-Mahrine (after M. Mackensen, *Die spätantiken Sigillata- und Lampentopffereien von el Mahrine (Nordtunesien): Studien zur nordafrikanischen Feinkeramik des 4. bis 7. Jahrhunderts* [Munich, 1993], 210, fig. 56)

known texts (Prokopios, Cosmas) is confirmed by archaeological and numismatic data: the presence of amphoras from Aqaba throughout the Red Sea region and at Axum, and finds of Axumite coins in Jerusalem, testify to relations that were not exclusively religious.²⁴⁵

The picture of commerce as a whole that we have briefly sketched was transformed in the second half of the sixth century. Trading volume dropped; the trade routes themselves are more difficult to unravel, a reflection, perhaps, of political upheavals. The Byzantine empire now maintained scarcely any contacts with western Europe beyond southern Italy (Otranto), Sicily, Ravenna, Venice, and certain points along the Adriatic, as well as Naples, Rome, and the ports of the Ligurian coast.²⁴⁶ Globular amphoras closely related to the Carthaginian LRA 2 amphoras, possibly produced simultaneously in both East and West, were distributed throughout the Mediterranean basin and the Black Sea,²⁴⁷ but they represented little more than the persistence of a commerce that at the start of the sixth century had been substantial and differentiated.

Money, the Instrument of Exchange

Byzantine money provided a flexible and hierarchical instrument for the empire's substantial level of exchange.²⁴⁸ We concentrate here on its specifics with regard to the sixth century. Three major events marked the monetary history of this period: Anastasios' reform of the bronze coinage; the adoption, following the Justinianic reconquest, of the Vandal and Ostrogoth monetary systems in Africa and Italy; and, finally, the inflation of small-denomination coinage during the second half of the century. The reform undertaken by Anastasios in 498 was sufficiently noticed by intellectuals to find mention in a good number of texts, which are usually chary of such data. The reform put an end to a long period of inflation in smaller denominations, whose value relative to the solidus dropped from $\frac{1}{5,400}$ in 396²⁴⁹ to $\frac{1}{7,200}$ in 445 or, in 498, to $\frac{1}{16,800}$, at which point it no longer exceeded 0.6–0.5 g, or even 0.2 g (Table 1).²⁵⁰ The decline in the gold value of bronze money became particularly noticeable in the reign of Zeno by virtue of

²⁴⁵ S. C. Munro-Hay, "The Foreign Trade of Adulis," *AntJ* 69 (1989): 43–52.

²⁴⁶ P. Arthur, "Anfore dall'alto Adriatico e il problema del *Samos Cistern Type*," *Aquileia Nostra* 61 (1990): 282–95.

²⁴⁷ Hayes, *Saragane*, 61–79 (types 9, 10, 28, 29, 30, corresponding to several productions from the 6th to the early 8th century; G. Murialdo, "Anfore tardoantiche nel Finale (VI–VII secolo)," *Rivista di studi liguri* 59/60 (1993–94): 213–46; L. Sagui, M. Ricci, D. Romei, "Nuovi dati ceramologici per la storia economica di Roma tra VII e VIII secolo," in *La céramique médiévale en Méditerranée* (Aix-en-Provence, 1997), 35–48.

²⁴⁸ Regarding the general characteristics, which remained prevalent at the beginning of the 7th century, see C. Morriison, "Byzantine Money: Its Production and Circulation," *EHB*.

²⁴⁹ *CTh* 9.21.8, in which one solidus is equivalent to 25 pounds of bronze, while the nummus (AE4) weighs $\frac{1}{216}$ pound, or approximately 1.5 g.

²⁵⁰ See, among others, the studies published in *L'inflazione nel IV secolo dopo C.*, Atti dell'incontro di studio, Roma 1988 (Rome, 1993), including J.-M. Carrié, "Observations sur la fiscalité du IVe siècle pour servir à l'histoire monétaire," 113–54, and Carrié's synthesis, "Les échanges commerciaux et l'état antique tardif," in *Economie antique: Les échanges dans l'Antiquité. Le rôle de l'état* (Saint-Bertrand-de-Comminges, 1994), 174–211.



Solidus



Semissis



Tremissis



Siliqua



Follis



Half follis



Dekanoummion



Pentanoummion



Nummus

Gold solidus of Anastasios, *DOC* 1:3i.1

Gold semissis of Justinian I, *DOC* 1:17.1

Gold tremissis of Justinian I, *DOC* 1:19.10

Silver siliqua of Justin II, *DOC* 1:18.3

Copper follis of Anastasios, *DOC* 1:23a.2

Copper half follis of Anastasios, *DOC* 1:24c

Copper dekanoummion of Justinian I, *DOC* :34.5

Copper pentanoummion of Anastasios, *DOC* 1:49b

Copper nummus of Justinian I, *DOC* 1:308

Table 1
Sixth-Century Coinage, 498–602

GOLD			SILVER	COPPER				
<i>Solidus/</i> <i>nomisma</i>	<i>Semissis</i>	<i>Tremissis</i>	<i>Siliqua and</i> <i>fractions</i>	<i>Follis</i>	<i>Half</i> <i>follis</i>	<i>Deka-</i> <i>noummion</i>	<i>Penta-</i> <i>noummion</i>	<i>Nummus</i>
~4.50 g 98% Au	~2.25 g 98% Au	≈ 1.50 g 98% Au	≈ 11–14 g 96% Au					
1	2	3	12	288	576	1,152	2,304	11,520
			1	24	48	96	192	
				1	2	4	8	40

the financial troubles that followed the defeat of the expedition of 468 against the Vandals, which swallowed up, to no avail, sums corresponding to a year's worth of public revenues.²⁵¹

The sources indicate the characteristics of the reform and its consequences. The replacement of units of currency by the follis²⁵² and its fractional denominations is described by Malalas: "[John the Paphlagonian] transformed all the small change that was in circulation (τὸ προχωρὸν κέρμα τὸ λεπτὸν) into follera, which he made current [legal tender] throughout the empire as of this date";²⁵³ and by an anonymous Syriac chronicle, which specifies that "the emperor issued a coinage of 40, 20, 10, and 5 nummi."²⁵⁴ Marcellinus Comes (ca. 498) offers the following commentary on the measure: "Nummis quos Romani terunciani [terentianos] vocant, Graeci follares, Anastasius princeps suo nomine figuratis placibilem plebi commutationem distraxit" ("in minting pieces marked with their value that the Romans called teronces and the Greeks follares, Emperor Anastasios implemented an exchange that was pleasing to the people").²⁵⁵ The term "exchange" (*commutatio*) highlights the importance of the relations between the two components of the monetary system: gold and bronze.²⁵⁶ If the exchange was "pleasing to the people," it was on the one hand because imprinting the value on the coins—a novelty that until this point had been used solely by the Vandals or the Ostrogoths—seemed a guarantee against arbitrary revaluations, and, on the other, because the relation to the solidus that was thus instituted undoubtedly favored the lower classes, whose cash property and earnings were most often limited to bronze coinage.

Calculating the equivalence of the follis and the solidus raises a number of technical problems too complex to treat here. The reconstruction that Morriison has proposed demonstrates an evolution that was in fact favorable to holders of bronze currency under Justinian as of the 530s and especially in the 540s, following the plague. In the first instance, the reconquest of Africa, to some degree, undoubtedly brought new resources of precious metal to the treasury and thereby facilitated the lowering of the price of gold expressed in bronze; in the second, the increase in the cost of services, which was linked to the scarcity of manpower, explains the attempt to satisfy labor interests by lowering the price of the solidus, thus offsetting the prohibition on pay raises that had been decreed in 544 in Justinian's Novel 122.²⁵⁷

It is likely, however, that this situation did not endure beyond the reign of Justinian. Certainly the weight of the follis remained stable at 18 g from 512 to 538 and from 542

²⁵¹ M. Hendy, *Studies in the Byzantine Monetary Economy c. 300–1450* (Cambridge, 1985), 221.

²⁵² For details on the weight and gold value of the 6th-century Constantinopolitan follis, see C. Morriison, "Monnaie et prix à Byzance du Ve au VIIe siècle," in eadem, *Monnaie et finances à Byzance: Analyses, techniques* (Aldershot, 1994), art. 3, p. 248 (= *Hommes et Richesses* [as above, note 15], vol. 1).

²⁵³ *Ioannis Malalas, Chronographia*, ed. L. Dindorf (Bonn, 1831), 400.

²⁵⁴ *Chronica minora*, ed. E. W. Brooks, trans. J.-B. Chabot (Paris, 1924), 4:115.

²⁵⁵ MGH AA 11.2 (*ad annum* 498). Commentary and references in Morriison, "Monnaie et prix," 243–44.

²⁵⁶ See Morriison, "Money," 900–901 and *passim*. Silver coinage was practically never struck in 6th-century Constantinople except for ceremonial purposes.

²⁵⁷ Commentary and references in Morriison, "Monnaie et prix," 246–48.

to 565, following the episode of the large folles dated by regnal years XII–XV, whose face value was near their nominal value; it declined progressively until it reached 11–12 g under Maurice and the first years of Herakleios' reign. The data provided in the papyri regarding the value of the follis in keratia, however, refine this view by showing a decline to $\frac{1}{20}$ keratia under Phokas and to $\frac{1}{36}$ under Herakleios.²⁵⁸

It is more than likely that this decline in the gold value of bronze money was the result of the striking of an increasing number of these coins by a government that lacked bullion and was forced as a consequence to reduce the weight of coins. This inflation entailed a rise in prices as expressed in small denominations, but we cannot track this as precisely as Roger Bagnall has done for the fourth century, in the course of which "prices rise almost immediately after each debasement such that the value of gold . . . in copper currency units is in line with the relationship between the face value of the coin and its metal content."²⁵⁹ We may conclude that the minimum daily living allowance of the poor, of prisoners, and of ascetics—approximately 3 nummi at the start of the fifth century—had risen to 10 nummi during the sixth, and to 1 follis around 570, which was also its level at the beginning of the seventh century. The decline in the weight and purchasing power of the follis is equally illustrated by the progressive disappearance of smaller denominations in excavation finds: the pentanoummon, like the dekanoummon, becomes increasingly rare as of the 580s.

This picture applies equally to the situation in the capital and in the eastern provinces of the empire. In the West, by contrast, in the territories that were reconquered from the Vandal and Ostrogoth kingdoms, the Byzantine monetary system adapted itself to succeed the existing "barbarian" systems.

The role of silver in the Vandal and Ostrogoth monetary systems was not, as we can see, called into question after the reconquest, and the mints of Carthage and Italy (at Rome and Ravenna) continued to strike silver in various denominations. At Carthage, these denominations compensated in part for the absence of fractional denominations of the solidus; despite their high face value (a half siliqua of 50 denarii was worth approximately 6 folles), they must have played an important role in day-to-day exchange, since they have been found in considerable number in site excavations.²⁶⁰ Another distinctive quality of Byzantine currency in Africa and in Italy relative to eastern issues is the greater importance under Justinian of small copper coins and particularly of nummi of less than one gram. This weighting can be measured at the sites by calculating the average value of bronze finds in nummi. Under Justin II, it was on the order of 10 nummi at Carthage, as opposed to 21 nummi at Athens. With the inflation of the

²⁵⁸ J.-M. Carrié, "Monnaie d'or et monnaie de bronze dans l'Égypte protobyzantine," in *Dévaluations* (as above, note 129), 2:253–70. These data may be supplemented and confirmed in part by those contained in the same documents concerning the number of talents to the solidus, as well as those studied by A. Papaconstantinou, "Conversions monétaires byzantines: P. Vindob. G. 1265," *Tyche* 9 (1994): 95–96 (for example 23,400 ca. 538, 48,000 in 569, 51,200 in 618, when the follis was only worth $\frac{1}{36}$ of a keration and weighed half of what it weighed in 512–538).

²⁵⁹ R. Bagnall, *Currency and Inflation in Fourth-Century Egypt* (Chico, Calif., 1985), 53.

²⁶⁰ C. Morrisson, "Le rôle du monnayage d'argent dans la circulation africaine à l'époque vandale et byzantine," *Bulletin de la Société française de Numismatique* 44 (1989): 518–22.

Table 2
Vandal Coinage ca. 450–533 (probable dates of minting)

Gold		Silver			Copper			
None	siliqua	½ siliqua	¼ siliqua	42 nummi	21 nummi	12 nummi	4 nummi	1 nummus
	100 denarii	50 denarii	25 denarii					
	500 nummi	250 nummi						
	1.3 g	0.7 g	0.35 g	10.5 g	8.1 g	4.9 g		0.5 g

Table 3
Byzantine Coinage in Carthage, 533–608

Gold		Silver			Copper			
Solidus	½ siliqua	¼ siliqua	⅛ siliqua	40 nummi	20 nummi	10 nummi	5 nummi	1 nummus
		25 denarii		14 g				0.5 g
		+ ⅓ sil. and						
		⅙ sil.						
		("200 num.")						

Table 4
Ostrogoth Coinage, 489–552

Gold		Silver			Copper			
Solidus, semissis, tremissis (in emperor's name)	siliqua	½ siliqua	¼ siliqua	40 nummi	20 nummi	10 nummi	5 nummi	1 nummus
		1.3 g	0.7 g	11.5 g	7.5 g	2.8 g	1.9 g	0.9 g

Table 5
Byzantine Currency in Italy, 540–602

Gold		Silver			Copper			
Solidus, semissis, tremissis	½ siliqua	¼ siliqua	⅛ siliqua	40 nummi	20 nummi	10 nummi	5 nummi	1 nummus
	250 nummi	125 and 120 nummus						

seventh century, this twofold differential drifted upward to 20 nummi, as opposed to 40 at Athens or Antioch under Constans II.²⁶¹ These specific patterns on occasion implied a different relation with gold coinage (probably 12,000 nummi to the solidus in Italy in the mid-6th century, as opposed to 7,200 at Constantinople; 360 folles to the solidus at Carthage under Maurice; 480 at Constantinople)²⁶² and quite plausibly reflect differences in the level of prices that the scarce sources suggest, but do not allow us to calculate precisely.

While more marked in Africa and in Italy, such regional particularities were not limited to the West. In Thessalonike from 538 to 562 and in Alexandria during the entire sixth century and even thereafter, small denominations did not follow the general pattern. Thessalonike in fact struck bronze coins inscribed ΙϚ(16), Ι(10), Η(8), Δ(4), Β(2), and Α(1), all with the marking ΑΡ which has long intrigued scholars, but is simply an abbreviation of “argyron,” the Greek equivalent of *nummus*. During a brief period under Justinian, Alexandria struck a heavy piece marked ΑΓ(33) and, especially, pieces of 12 nummi (ΙΒ), as well as other coins, more rare, of 6 and 3 nummi. These differences among them are probably related to their specific gold-copper ratios.²⁶³

These specificities go hand in hand with a marked regional character in the circulation of small pieces, given that each province was for the most part, although not exclusively, supplied by its local mint. Such was the case for Africa and Egypt in particular, much less so for other regions of the empire. At Antioch, for example, while plentiful local issues represented 62% of the coin in circulation, Constantinople and the neighboring mints contributed more than a quarter of the currency supply; at Apameia and Dehes the proportions were reversed: 25% and 57%. The integration and mixing of the coinage undoubtedly took place, but to a lesser degree than during the Roman period, the second or the fourth century, for example; the noticeable similarities between diverse areas of the empire (p. 933, Fig. 6.1–15) nonetheless testify to a high degree of interregional relations.

The ubiquity of money and its indispensable character warrant to this day the celebratory terms of John Chrysostom: “The use of coin welds together our whole life, and is the basis of all our transactions. Whenever anything is to be bought or sold, we do it all through coins.”²⁶⁴ Cities and smaller towns such as Pernik (Dacia Mediterranea) or Sagalassos (Phrygia) yield sixth-century coins in numbers proportional to their relative importance, but finds do not emanate exclusively from urban centers. At the rural site of Dehes in northern Syria, for example, occupied levels of Phase 4 (last third of the

²⁶¹ C. Morrisson, “Carthage, production et circulation du bronze à l’époque byzantine d’après les trouvailles et les fouilles,” *Bulletin de la Société nationale des antiquaires de France* (1988): 239–53.

²⁶² Hendy, *Studies*, 484–85; Durliat, “Taxe sur l’entrée des marchandises.”

²⁶³ Hendy, *Studies*, 497–98; W. Hahn, *Moneta Imperii Byzantini*, 3 vols. (Vienna, 1973–), passim, whose hypotheses are based on the metrology rather than on the texts.

²⁶⁴ John Chrysostom, PG 51:99, translated and cited by S. J. B. Barnish, “The Wealth of Julianus Argentarius: Late Antique Banking and the Mediterranean Economy,” *Byzantion* 55 (1985): 37. On this ubiquity during the Roman period, see C. Howgego, “The Supply and Use of Money in the Roman World, 200 B.C. to 300 A.D.,” *JRS* 82 (1992): 30: “the normal use of coin as a means of exchange was ubiquitous in the Roman world.”

6th century), excavated from 1979 to 1991, have yielded first-century Hellenic and Roman pieces that had been put back into circulation, six pieces from the fifth century, and five from the sixth. The small “hoards” of minimi or isolated finds of Byzantine bronze coins in Italy similarly testify to a vast distribution, from Calabria (Scolaccio and Massafra, for example), Campania (Castro dei Volsci, Fontana Liri, Minturnae, Sessa Aurunca, Cumae, etc.), and Latium, as well as the plain of the Po valley (the villa Clelia at Imola, Monselice, Salagareda) and the Veneto.²⁶⁵ Written texts—saints’ lives in particular²⁶⁶ but inscriptions as well—are both reminder and proof of the basic role of money in exchange and taxation: the decree of Abydos (late 5th century) assigns *sportulae* and tax rates in *keratia* and in *folles*: the 2 *xestai* to be paid by wine shippers (a little more than 1 liter) constitute a *pourboire* in the literal sense.²⁶⁷ Along the less traveled axes and even at town gates of cities of moderate size, the tariffs of Anazarbos and of Cagliari record taxes that were calculated in *keratia* and *argyra* (*nummi*) in the case of the former, and in *nummi* alone in the case of the latter, which deals mostly in payments in kind, unsurprising evidence of less active monetary circulation in Sardinia at the end of the sixth century.²⁶⁸

The *solidus* remained the unit essential to the stability of the system. Its weight consistently respected the standard of $\frac{1}{72}$ of a pound fixed at its creation by Constantine; at the close of the fifth century it retained the high level of fineness (in excess of 99%) that had been restored by Valentinian’s novel of 367. The moderate debasement in its alloy (1.4% silver after Justinian, 98.2% gold on average from 527 to 685), while permitting a savings in precious metal (albeit on the very small scale of 0.5%), did not undermine confidence in the gold currency, which was the instrument of imperial spending and largesses, as well as the currency of both large-scale commerce and private transactions of a modest scale. Although its export was prohibited, coined gold nonetheless appears in finds outside the borders of the empire. We need not look to gifts, imperial tribute, or payments to mercenaries as the sole explanations; in certain cases it was trade, whether through formal dispensation or contraband, that determined the form of payment for merchandise. The issuance of a series of lightweight *solidi* (of 20 *keratia*) began under Justinian. These have been interpreted by some as currency specifically intended for trade with the barbarian West on the evidence of their frequent discovery in these regions; it is more likely, however, that the lightweight *solidi* represent a currency of forced exchange used by the state to effect expenditures during a period of crisis.

²⁶⁵ E. A. Arslan, “La circolazione monetaria (secoli V–VIII),” *La storia dell’alto medioevo italiano (VI–X secolo) alla luce dell’archeologia* (Florence, 1994), 497–519, and “Italia medievale,” in *Survey of Numismatic Research, 1991–1995*, ed. C. Morriçon and B. Kluge (Berlin, 1997), 447–68. S. J. B. Barnish, “Pigs, Plebeians and *Potentes*: Rome’s Economic Hinterland, c. 350–600 A.D.,” *PBSR* 55 (1987): 170, 175.

²⁶⁶ See the list of sources assembled in Patlagean, *Pauvreté économique*.

²⁶⁷ Text, translation, and commentary by Dagron, in Dagron and Feissel, “Inscriptions inédites du Musée d’Antioche.”

²⁶⁸ G. Dagron, in Dagron and Feissel, *Inscriptions de Cilicie*, 170–85; Durliat, “Taxes sur l’entrée des marchandises.”

The stability of intrinsic value was accompanied by a stability of prices expressed in gold. The important role played by the more readily available fractional denominations—the *semissis* and *tremissis*—is illustrative of this “vertical” diffusion in a large part of the society.²⁶⁹ The distribution of coin finds both inside and outside the empire is testimony to a level of wealth and economic vitality that is undeniable. The vast geographic distribution of Byzantine gold coins, their penetration, and their widespread imitation in the barbarian kingdoms of the West, as well as in India and China, are measures of the influence of not only the imperial model, but also the underlying economy, which, in many respects, remained “Roman.”

Conclusion

By the first half of the sixth century, the empire had reached a fairly high level of prosperity as the result of a state of relative peace that had lasted at least several decades in the East. Over a territory that had been extended by the reconquest and fairly well defended, there prevailed a ranked and robust organization of space, with *metropoleis*, villages populated by farmers or small proprietors, and a growing network of large towns or secondary cities. The state (or its representation) was ubiquitous, and the same administrative and juridical principles held true for Petra, Hadrumentum, and Constantinople. A complex system of organization inherited from the Roman Empire governed both social life and the economic system. Roman tradition and Roman culture framed an output that was varied, well known, and widely distributed, whether in marble, ceramics, textiles, metalwork, or foodstuffs. Construction and planning techniques were of high quality, as were artisanal techniques, but represented merely the application or the development of principles that had been known since the end of the Hellenistic period or the late Roman Empire (glassblowing, hydraulic mills, screw-presses). A network of exchanges and of complex relations, in which the state played a role that partook more of incentive than dominance—contrary to what is too often argued—stimulated a diversified and monetized economy. Stabilized by Anastasios, the multimetal currency—the inheritance of Rome—provided a hierarchized and flexible instrument of exchange that was quite widely distributed. All things being equal, this picture might thus illustrate the formula of “development through trade.”

To be sure, significant changes took place, with important consequences for economic and social life, in particular, the creation of Constantinople and the expansion of Christianity. The first entailed the diversion of Egyptian wheat from Rome to the new capital. The second contributed to the gradual replacement of the *curiae* (which had often become inefficient in the management of the cities) with bishops, seconded by rich landowners, financiers, goldsmiths-bankers, and the representatives of imperial power. At the same time, the decline of certain regions that had come under barbarian control, or had fallen victim to the uncertainty of the times—particularly in the West

²⁶⁹ See in particular J.-P. Callu, “Le ‘centenarium’ et l’enrichissement monétaire au Bas-Empire,” *Ktema* 3 (1978): 301–16.

(the Balkans, the Danubian region, central Italy)—was counterbalanced by the development of others, such as Palestine, Arabia, Syria, and the coastal regions of the Aegean and the Adriatic.

Beginning in the second half of the sixth century, this ancient order began to fall apart. Demographic setbacks resulting from the plague weakened the imperial organization's ability to withstand the invasions of Slavs, Sasanians, and Arabs. The Roman formulas no longer worked. Solutions that had been used in some regions until the end of the reign of Herakleios were now too limited in space and volume to reverse the course of events. It was at this point that the withdrawal into limited regional areas, the decline in exchange, the transformation of the urban network, and the ruralization of cities became manifest; these phenomena are analyzed in other chapters in this book.

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Anemourion

James Russell

The city of Anemourion, located on the east flank of Cape Anamur, the southernmost promontory of Asia Minor, has been the subject of investigation by Canadian archaeologists since 1965. Because of the dearth of written sources, most of what we know about the city and its history is based on the results of these excavations. The picture that emerges is consistent with cities in other parts of southern Asia Minor during the Roman and early Byzantine periods.¹ From the first to the middle of the third century, Anemourion shared in the general prosperity of the eastern Roman Empire and, like many other cities of the region, issued its own copper coinage. To this period belong the most striking ruins still visible on the site, especially the extensive necropolis outside the walls and a cluster of public buildings at the southern end of the site. The most conspicuous of these is a spacious baths-palaestra complex more than 100 m in length dating from the mid-third century. Though never quite finished, it represents the most ambitious expression of the prosperity the city enjoyed during the second and early third century. This prosperity came to a decisive end with the city's capture by the Persian forces of the Sassanid Shapur I around 260.² This was followed by a long period of unrest throughout the region, culminating in a succession of Isaurian rebellions during the fourth century. Anemourion was especially exposed, and for a time at the end of that century it was occupied by a military garrison responsible for renewing its defenses.³

The revival of the city's fortunes in the fifth century is evident in the building of at least four churches and two small baths (Fig. 1). Some of these buildings too have

¹ For summaries of the history and antiquities of the site on the basis of fieldwork, see J. Russell, "Anemurium: The Changing Face of a Roman City," *Archaeology* 33.5 (1980): 31–40; *The Mosaic Inscriptions of Anemurium*, *Ergänzungsbande zu den Tituli Asiae Minoris* 13 (= *Denk Wien* 190) (Vienna, 1987), 15–23. Interim reports of field work in progress have appeared regularly since 1966 in *Türk-ArkDerg* and in "Recent Archaeological Research in Turkey" in *AnatSt*. All of the objects discussed here are housed in the Anamur Museum.

² E. Honigmann and A. Maricq, *Recherches sur les Res Gestae divi Saporis* (1953), 2.21, pp. 14, 149, 153.

³ E. Alföldi-Rosenbaum, "Matronianus, Comes Isauriae," *Phoenix* 26 (1972): 183–86; C. P. Jones, "The Inscriptions from the Sea-Wall at Anemurium," *Phoenix* 26 (1972): 396–99; J. Russell, "The Military Garrison of Anemurium during the Reign of Arcadius," in *Atti del XI Congresso Internazionale di Epigrafia Greca e Latina, Settembre 1997* (Rome, 1999), 721–28.

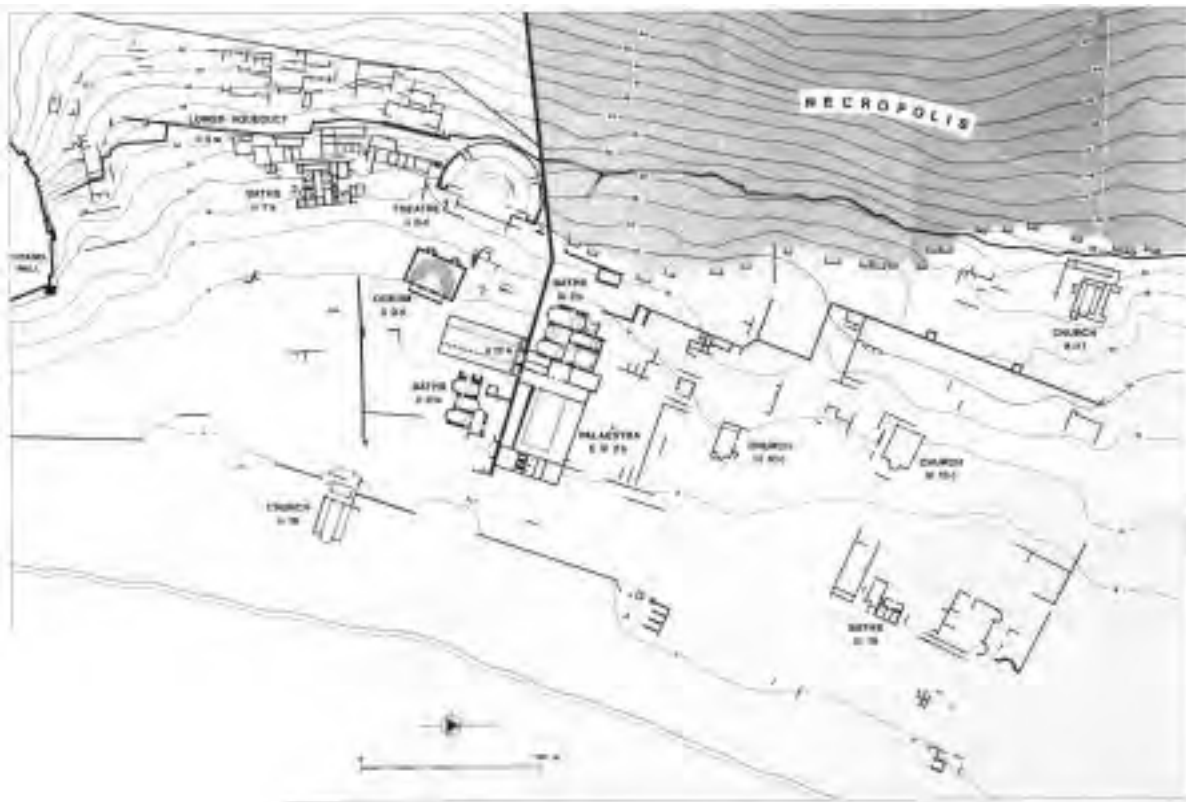
been explored, revealing well-preserved mosaic floors, some of which were donated by private individuals whose names are recorded in inscribed panels.⁴ Anemourion, in common with other communities of the region, probably benefited from the favor that the Isaurian emperor Zeno I (474–491) bestowed on his native land, and the city seems to have prospered well into the following century. There is ample evidence for a sharp decline in the city's fortunes sometime before the end of the sixth century, however, probably accelerated by an earthquake that caused widespread damage around 580. The effects are evident in the collapse of the roofs of at least two of the churches and in the breakdown of the aqueduct system, which accounts for the construction of wells as an alternative source of water and the transformation of whatever baths were still functioning to other uses.⁵ The failure of the inhabitants to repair or rebuild structures affected by the earthquake, however, clearly reflects the city's impoverished state. This condition was perhaps exacerbated by a serious loss of population and by the increasingly turbulent conditions that attended the long Persian War (611–628) and the subsequent depredations of marauders that plagued the Anatolian coast in the aftermath of the Arab invasions of Cyprus in 649 and 653/654. The marked break in the series of coin finds that occurs around 660, especially when associated with evidence for the abandonment of the various seventh-century houses explored, indicates that human activity on the site during the last decades of the seventh century was much reduced and had probably ceased completely by the early eighth century.⁶

Compared to the flourishing city of the early Roman Empire or the Christian city of the fifth and early sixth centuries, the community of Anemourion in the final decades of its existence (ca. 580–660) was a sadly diminished shadow of its predecessors. It is an interesting irony, however, that the circumstances of its abandonment have made it possible to present a far more detailed account of the daily lives and occupations of the city's residents and the commerce and industry that they practiced in this final phase of its history than in any earlier phase. A great deal of the evidence comes from the vast baths-palaestra complex of the mid-third century, which had long ceased to fulfill its original function. Indeed, the process of dismantling the architectural decoration of the palaestra seems to have begun within less than a century of its construction. By the late sixth century the colonnaded porticoes of the palaestra had disappeared completely, its mosaic floor lay concealed beneath 25 cm of earth fill, and much of its open space was occupied by modest houses forming virtually a small village community. Especially noteworthy was a sequence of three houses standing more or less in line from west to east overlying the mosaic of the long dismantled north portico of the palaestra (Fig. 2). The most informative feature of these buildings was the well-stratified context of the many objects rejected or overlooked by the last occupants when

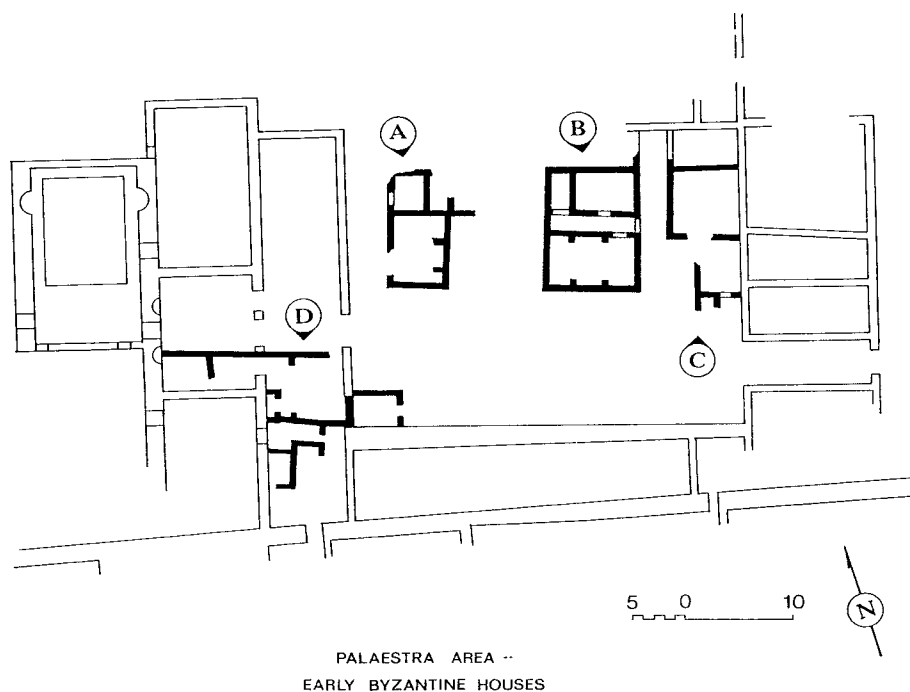
⁴ Russell, *Mosaic Inscriptions*, 61–69, 76–89.

⁵ For a detailed account of a well in the palaestra area, see C. Williams, "A Byzantine Well-Deposit from Anemurium (Rough Cilicia)," *AnatSt* 27 (1977): 175–90.

⁶ For a summary of coin finds at Anemourion for the years 641 to 705, see J. Russell, "Transformations in Early Byzantine Urban Life: The Contribution and Limitations of Archaeological Evidence," *The 17th International Byzantine Congress: Major Papers* (New York, 1986), 137–54, esp. 154 n. 37.



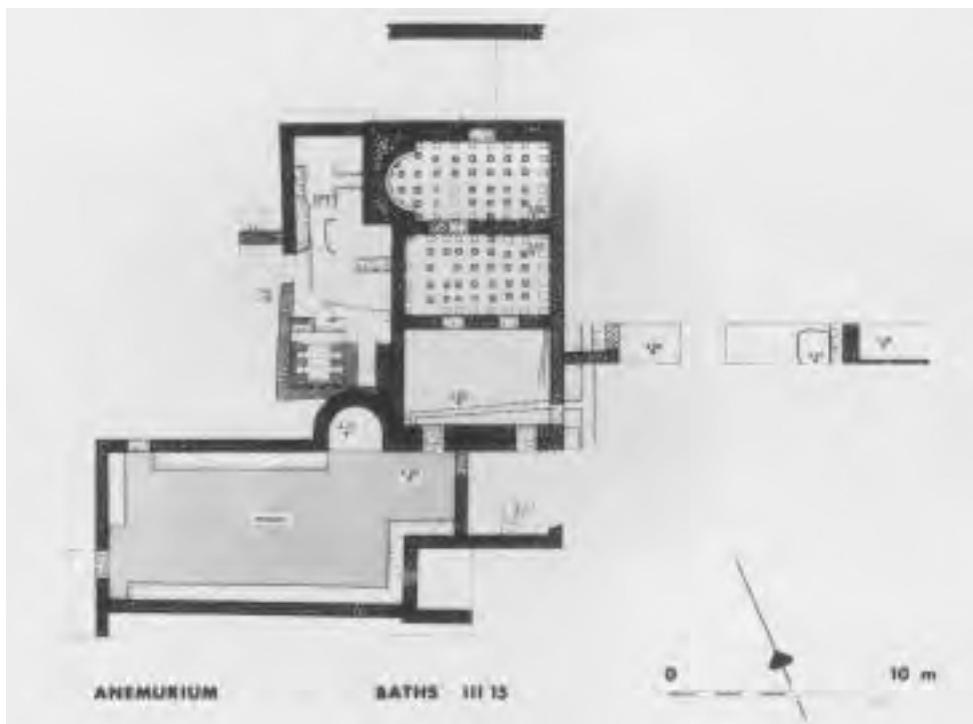
1. Anemourion, general plan of city (drawing by Tom Boyd)



2. Anemourion, plan of baths-palaestra complex with secondary domestic structures indicated A-D (drawing by Tom Boyd)



3. Anemourion, general view of heated chambers of large baths subsequently reused for industrial installations (photo: Hector Williams)



4. Anemourion, plan of small Byzantine baths adapted for commercial purposes in the city's latest phase (drawing by Tom Boyd)



5. Anemourion, seventh-century pottery kiln in the service area of the small Byzantine baths (photo: Hector Williams)

they abandoned their homes. Sealed beneath the accumulation of debris from fallen roofs and collapsed walls, these objects had remained lying on the floor undisturbed until the time of excavation. The clearing of these buildings has produced considerable quantities of pottery, glass, coins, and a heterogeneous collection of bric-a-brac. Even without counting innumerable copper and iron nails, links of chain, and other unidentified metal fragments, there is a catalogued inventory of more than five hundred individual items. These consist of broken fragments of tools, harness, furniture, and dress, or stray objects such as weights, seals, amulets, gaming pieces, and the like. Although insignificant at first sight, the cumulative total of the archaeological scraps sealed by the destruction debris of these late houses at Anemourion illuminates many aspects of the social, economic, and cultural life of their occupants.⁷

Of the occupations and trades practiced by the residents of the houses of the palaestra, fishing was probably the most widespread, to judge from the number of objects associated with that activity, such as bronze barbed fishing hooks of various sizes, lead weights for nets, and netting needles. Whereas the prevalence of fishing is hardly unexpected in a coastal community, it remains unclear whether this was a full-time activity assigned to certain members of the household, as is the custom with the villagers living near the site today, or a part-time or seasonal occupation combined with the practice of some other trade. In sharp contrast to fishing, evidence for agriculture is surprisingly sparse. Only two items clearly identifiable as farming tools have been found in domestic contexts, a curved iron blade, probably belonging to a billhook employed for chopping trees and hedges and a multipurpose iron pickax (*dolabrum*). The discovery of bronze bells with pierced suspension lugs in several houses might indicate the presence of livestock, but their diminutive size points rather to their use as *tintinnibula* for apotropaic purposes.⁸ Nevertheless, it is reasonable to suppose that some residents at least owned and worked land in the fertile alluvial plain that extends northeast of the city. The many fragments of basalt grain mills and at least one oil press found on the site clearly imply the ready availability of two major crops. Unfortunately, the intensive agriculture practiced in the region in recent decades has virtually obliterated all trace of rural settlement in the Plain of Anamur. Evidence of a once thriving olive industry in the chora of Anemourion, however, survives both in the remains of oil presses visible in the ruins of some of the early Byzantine villages situated on the higher ground that overlooks the plain and in the clumps of olive trees, now wild, standing in their vicinity.⁹

The same contexts already noted in Anemourion itself have also produced an inter-

⁷ For illustrations of many of the objects listed, see J. Russell, "Byzantine *Instrumenta Domestica* from Anemurium: The Significance of Context," in *City, Town, and Countryside in the Early Byzantine Era*, ed. R. L. Hohlfelder (Boulder-New York, 1982), 155–62, figs. 1–8.

⁸ These are discussed in J. Russell, "The Archaeological Context of Magic in the Early Byzantine Period," in *Byzantine Magic*, ed. Henry Maguire (Washington, D.C., 1995).

⁹ Remains of circular stone basins and crushers have been noted, for example, at Ayvasıl (H. Basi-leios), Bonjuk Kalesi, and at the ancient settlement identified as Rygmanoi that underlies the medieval fortress of Mamuriye Kalesi. F. Hild and H. Hellenkemper, *Tabula Imperii Byzantini*, vol. 5, *Kilikien und Isaurien* (Vienna, 1990), 205, 216–17, 393.

esting variety of general purpose tools, perhaps in some cases forming part of a carpenter's kit. They include iron awls, cold chisels, knife blades, and an iron adze. More closely identifiable with specific trades, on the other hand, are a leaded bronze stonemason's plumb bob, tailor's thimbles, the heavy needle of a leatherworker or sailmaker, and the bronze balance arm and pan of a jeweler's miniature scales. A diminutive leaded bronze hammerhead may conceivably also have been part of a jeweler's equipment. That there were goldworkers operating in the community seems to be confirmed by the discovery in a late grave constructed on the floor of one of the city's churches of a small collection of gold appliqué ornaments in repoussé and openwork designs that exhibit characteristics of local workmanship.¹⁰ Female occupations may also be identified among the small objects from the palaestra houses. Spinning was clearly the most common activity, as is clear from the number of spindle whorls in various shapes and materials and spinning crochets, but the occasional appearance of loom weights indicates that weaving was also practiced. It is also evident from the discovery of lead weights in varying denominations and fragments of apparatus belonging to steelyard scales that retail activity of some form was taking place.¹¹ There is nothing to indicate the nature of the goods being traded, but the appearance of a number of lead seals bearing official monograms suggests that some of the commodities on sale may have been shipped in containers from distant places.

Unlike the predominantly domestic economy found in the residential quarter that had developed in the former palaestra and its environs was the industrial character of activities conducted within the walls of some of the former public buildings of the city. A low circular walled enclosure of coarse construction built against the front row of seats in the cavea of the odeon-bouleuterion, for example, contained a considerable accumulation of ash. This may have been part of a blacksmith's establishment that must have extended into the west wing of the cryptoporticus ambulatory that supported the cavea, for several iron tools were found there in fill overlying the mosaic floor. The large baths that dominated the west end of the palaestra, however, produced the most striking evidence of an industrial quarter during the last phase of the city's existence (Fig. 3). The building, long ago stripped of the marble revetment and moldings that once adorned its walls, must have presented a gaunt appearance. Even the raised hypocaust floors of the heated rooms had been dismantled to accommodate the industrial operations now conducted there. Occupying the apse of the easternmost of the three heated rooms in the south wing of the baths (Room G), for example, stand the remains of a large limekiln. This is only one of a number of limekilns still standing in various parts of the city, including two situated beyond the southeast corner of the palaestra. There is no evidence to date when these limekilns were in operation, but from the partly burned architectural and even the occasional sculptured fragments found in or near the kilns that have been cleared, there can be no doubt that the methodical spolia-

¹⁰ For description and illustrations, see J. Russell, "Excavations at Anemurium, 1982," *Classical Views* 27 (1983): 179, pls. 13–14.

¹¹ The most striking example is a lead counterpoise weight encased in bronze in the shape of a bust of Athena. C. W. J. Eliot, "A Bronze Counterpoise of Athena," *Hesperia* 45 (1976): 163–70.

tion of the city's public buildings provided a steady supply of limestone to keep them busy. There is in fact some indication that the inhabitants were still engaged in this practice in the late sixth or early seventh century in a pile of marble and limestone fragments found in one of the city's churches that had been left in ruins after the earthquake of ca. 580. Consisting for the most part of fragments belonging to the bema screen, this carefully assembled material was perhaps destined for one of the limekilns, but had somehow escaped the attention of those responsible for transporting it there. Alternatively, of course, the pile of architectural fragments may have been intended for reuse as spolia in some building project.

The manufacture of pottery seems to have been Anemourion's principal industry through much of its history. Claybeds situated beyond the city's northern limits seem to have provided the main source of supply. Here an extensive potters' quarter developed, the remains of which have survived the intensive agriculture of recent decades in the form of an extensive mound approximately 60 m² strewn with kiln brick and supports, wasters, and vast quantities of sherds, for the most part belonging to amphoras. With a much reduced population confined to a restricted area of the earlier city, the potters of Anemourion in the last years of the city's existence clearly found it more convenient to locate their kilns nearer their own homes in the center of the site. Thus kilns were constructed in convenient recesses and corners of the long disused public buildings. This development is especially marked in the large baths within which at least three pottery kilns were established. One of these was certainly employed in making lamps, for three terra-cotta lamp molds were found in the course of excavating the fill of the baths. An excellent sample of the wares produced by this pottery came to light in a hoard of nearly seven hundred unused lamps in a variety of forms, for the most part moldmade, the most distinctive being one of ovoid shape with its convex upper surface decorated with a stylized face. They were found carefully stacked in the long disused hypocaust system of another of the city's public baths. The fact that one of the molds discovered in the vicinity of one of the kilns situated in the large baths was designed to create lamps in the form of the stylized face found in the hoard confirms the association. No datable material was found with the lamps, but the dangerous conditions that prevailed after 650 when the Isaurian coast was exposed to Arab raids from Cyprus would have provided ample motivation for a lamp merchant fearful for his livelihood to conceal a portion of his stock from marauders. In more peaceful times he had been engaged in shipping his lamps to Cyprus, for examples of another form of his wares have been recorded at Salamis and in the Kornos Cave.¹²

Further evidence of Anemourion's economy in the last decades of its existence has also come to light in another of the city's baths that was subsequently adapted for commercial use. This structure, erected probably toward the end of the fifth century about 200 m north of the palaestra, functioned as a bath for no more than a century. It had certainly gone out of use before the end of the sixth century, probably at the time of the earthquake of ca. 580, which must have caused serious and irreversible

¹² H. Williams and P. Taylor, "A Byzantine Lamp Hoard from Anamur (Cilicia)," *AnatSt* 15 (1975): 77–84.

damage to the aqueduct that supplied it. Though modest in size and simple in design compared to its spacious predecessors, this establishment was handsomely appointed with walls sheathed in marble revetment and the entire floor of the *apodyterium* paved with an elaborate mosaic.¹³ The plan of the baths consisted of a straightforward succession of barrel-vaulted chambers, with the frigidarium at the south, followed by the heated tepidarium and caldarium respectively, the floor in each case supported by the piers of a hypocaust system (Fig. 4). During the last half century or so of the city's existence, the building seems to have been adapted for domestic use, with the heated rooms of the former baths largely reserved for the owner's commercial enterprises, especially pottery. The evidence for this lies in the considerable quantity of material recovered from the excavation of the confused layers of debris that had accumulated when the raised floors of the heated rooms had collapsed from the impact of heavy masses of masonry falling from the vaulted roofs. Especially noteworthy was the large amount of pottery found immediately above or mingled with the layer of furnace ash covering the flagstones that formed the base of the hypocaust system. Some of this material consisted of broken tile from the original raised floor, but most of it took the form of fragments of a wide variety of household wares.

These vessels were evidently standing in stacks on the floor up to the time when the raised floor collapsed, carrying everything that it supported into the hollow space beneath. Although a number of vessels associated with everyday domestic living such as cooking pots and assorted lids were found, most of the pottery belonged to various categories of the fine red slip wares in circulation in the eastern Mediterranean during the first half of the seventh century. Cypriot Red Slip accounted for the majority of vessels found, but African Red Slip was also represented in considerable quantity, as well as a number of imitation wares, perhaps of local manufacture.¹⁴ The abundance and variety of the quality wares found in these rooms far exceeds what one would expect to find in an ordinary domestic setting. Moreover, the large number of copper coins found in the same rooms, a total of sixty-two, almost all of them dated to the period 629–658, is without parallel from other domestic contexts in Anemourion of the same period. Also remarkable for a normal household is the quantity of objects associated with commerce, eight lead weights and one lead seal. Thus it is reasonable to conclude that the occupants of these premises were engaged in the sale of pottery and probably other commodities. It is equally clear, however, from the heterogeneous character of the other small objects found in similar contexts throughout the baths, such as lamps, fishhooks, spindle whorls, rings, a buckle, bone die and gaming counters, as well as the terra-cotta kitchen utensils mentioned above, that the family that owned the business also lived amidst their stock.

Explorations at the rear of the building in the enclosed space that once housed the service area of the baths brought to light a pottery kiln of considerable size (2.30 × 2.10 m) at the southern extremity (Fig. 5). It is a brick-lined stone structure consisting

¹³ For a description of the baths, see J. Russell, "Excavations at Anemurium," *TürkArkDerg* 22.2 (1975): 125–26; Russell, *Mosaic Inscriptions*, 39–49.

¹⁴ C. Williams, *Anemurium: The Roman and Early Byzantine Pottery* (Toronto, 1989), 108, 113.

of a lower furnace chamber roofed by three parallel brick ribs. These would have supported the perforated grill floor of an upper chamber no longer existing where the objects were placed for firing. Unfortunately the scanty finds of pottery from the kiln and its immediate environs do not suffice to identify the wares that it produced with any certainty, though most sherds seem to belong to amphoras.

From the northern end of the same service enclosure in the vicinity of the baths' *praefurnium* there came to light the most significant evidence for a local pottery industry in the last years of Anemourion's life. At some point after the baths had fallen out of use, this part of the service area had become a rubbish dump. Conspicuous among the finds was a remarkably homogeneous deposit of broken pottery consisting of many hundreds of fragments. With the exception of a handful of sherds of the latest seventh-century African and Cypriot Red Slip types found at Anemourion, the deposit was entirely composed of a previously unknown ware of inferior fabric and poorly executed. Because of the distinctive modeling of its rims in a scalloped or undulating design, it has been dubbed Piecrust Rim ware. It was manufactured in a surprising range of forms that includes not only plates and bowls for the table in shapes imitating the latest African and Cypriot Red Slip types, but also vessels intended for everyday kitchen use, such as large basins, casseroles with lids, and a colanderlike dish. The uniqueness of this ware makes it virtually certain that it was manufactured locally. Especially striking about this deposit is how much its composition differs from that of every other seventh-century pottery assemblage on the site, including that found in the heated rooms of the same baths. In every other context the dominant wares are African and Cypriot Red Slip or obvious imitations produced from inferior clays. It is easy to explain the relative abundance of these copies to supply a less affluent market unable to afford the genuine articles.

The unique deposit of Piecrust Rim wares, covering the entire gamut of table and kitchen wares, on the other hand, requires a very different set of circumstances to account for its existence. It is tempting to see this deposit as originating from a local pottery industry that was obliged to produce not only the traditional range of coarse vessels, especially amphoras, as in the past, but the entire range of pottery required by the community. The obvious context for such a necessity would have occurred in the 650s, when the community was prey to Arab raids from Cyprus. It is easy to envisage coastal traders with their familiar cargoes of imported traditional fine wares giving the Isaurian coast a wide berth during these perilous times. The community of Anemourion, with a long pottery tradition in its past, could surely have proved capable, at least in the short term, of responding to the emergency from its own resources. How better to explain the local Piecrust Rim ware in its many forms than as a temporary solution until normal trading practices might resume? As the archaeological record makes very clear, however, this expectation turned out to be in vain.¹⁵

¹⁵ I am much indebted to my colleague Caroline Williams for elucidating the significance of this and other forms of pottery evidence at Anemourion. Williams, *Roman and Early Byzantine Pottery*, 53–57, 108, 114, 116–18.

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Part Three
Structures, Organization, and
Development of Production

The Rural Economy, Seventh–Twelfth Centuries

Jacques Lefort

The preface to a Florentine manuscript of the *Geoponika* is dedicated to Constantine VII Porphyrogennetos and includes this eulogy of agriculture and agronomy:

Knowing that the state consists of three elements—the army, the clergy, and agriculture—you have devoted no less care to the latter, which is best able to preserve human life. That which several of the ancients discovered through their study and experience of cultivating the land and their care of plants, the seasons, the methods and terrain suitable to each, and furthermore the discovery of water and the construction of buildings, their implantation and orientation, all these and many other important things, the greatness of your genius and the depth of your spirit have gathered together, and you have offered to all a work that is generally useful. Immediately, he who applies himself to the fruit of your labors is able to recognize exactly what his existence consists of, and he may observe in perfect order that which is both useful and necessary, what the basis of human life is and that on which he lavishes all his care. He can see not only what is necessary, but also superfluous things, conducive solely to the enjoyment of his eyes and his sense of smell. (Prooimion 6–9)

Though this text underlines the need for all to know their allotted place in society, it also serves to illuminate an important fact: the land, the “care of plants” that can grow on it, and the pleasures and revenues that may be derived from it, were extremely important to the aristocracy of the mid-tenth century. The *Geoponika*, a compilation of ancient texts that seems to testify to agricultural practices in the sixth century, enjoyed great success in later periods.

In the twentieth century, the rural economy of Byzantium has not been studied as much as the fiscal and juridical aspects of agrarian history.¹ The explanation lies to

This chapter was translated by Sarah Hanbury Tenison.

¹ Lemerle pays homage to 19th-century Russian historiography and its pioneering work in this field (*The Agrarian History of Byzantium from the Origins to the Twelfth Century* [Galway, 1979], vii); for Soviet works that are principally concerned with the nature of the Byzantine state, I refer to the bulletins published by I. Sorlin in *TM* since 1965. A. Dunn, “The Exploitation and Control of Woodland and Scrubland in the Byzantine World,” *BMGS* 16 (1992): 235–98; J. F. Haldon, *Byzantium in the Seventh Century: The Transformation of a Culture* (Cambridge, 1990); A. Harvey, *Economic Expansion in the*

some extent in the nature of the documentation and the fact that historians, in particular, F. Dölger and P. Lemerle, concentrated on the history of institutions. The *Agrarian History Of Byzantium*, published by Lemerle in 1979 (following on his *Esquisse* in the *Revue historique* in 1958), is still the leading work in this field. Some historians have followed G. Ostrogorsky's lead in analyzing the characteristics of the Byzantine agrarian system so as to place Byzantium in relation to "feudalism." Some of them have wondered whether the nature of the Byzantine state, which is sometimes oddly perceived as not truly feudalized, was responsible for the presumed "blockages" in the society and economy of Byzantium at the end of the period under consideration.² However, the rural economy as such is often considered of secondary importance in these studies. Furthermore, they entertain a pessimistic view of the results of Byzantine agriculture, possibly because this apparently immobile rural economy was thought to explain, in part, either Mantzikert or the fall of the empire in 1204.

Articles published by J. Teall in 1959 and 1971 in *Dumbarton Oaks Papers* on the grain supply of Constantinople and on the Byzantine agricultural tradition, run counter to these views and have met with little support. One should recall the discussion thirty years ago or less of the "golden" seventh and eighth centuries, when the empire was supposedly peopled by free peasants, often of Slavic origin, who flourished within the framework of the rural commune. "Feudalism" was thought to have undermined this well-adjusted society by subjugating the rural population to great landowners; manpower grew scarce on the land, production stagnated in the absence of technical advances, and trade was reduced to a minimum. Nowadays, and in all probability rightly so, the picture is one of population growth and an expanding economy. This constitutes a radical change of perspective, as the twelfth century, which now attracts the

Byzantine Empire, 900–1200 (Cambridge, 1989); M. F. Hendy, *Studies in the Byzantine Monetary Economy c. 300–1450* (Cambridge, 1985); A. Jardé, *Les céréales dans l'Antiquité grecque* (Paris, 1925; repr. 1979); M. Kaplan, *Les hommes et la terre à Byzance du VI^e au XI^e siècle: Propriété et exploitation du sol* (Paris, 1992); J. Koder, *Gemüse in Byzanz* (Vienna, 1993); Ph. Koukoules, Βυζαντινὸν βίος καὶ πολιτισμὸς (Athens, 1948–55); A. E. Laiou-Thomadakis, *Peasant Society in the Late Byzantine Empire: A Social and Demographic Study* (Princeton, N.J., 1977); J. Lefort, *Villages de Macédoine*, vol. 1, *La Chalcidique occidentale* (Paris, 1982); idem, "Radolivos: Population et paysage," *TM* 9 (1985): 195–234; P. Lemerle, *Cinq études sur le XI^e siècle byzantin* (Paris, 1977); P. Magdalino, *The Empire of Manuel I Komnenos, 1143–1180* (Cambridge, 1993); E. Malamut, *Les îles de l'Empire byzantin, VIII^e–XII^e siècles*, 2 vols. (Paris, 1988); J.-M. Martin, *La Pouille du VI^e au XII^e siècle* (Rome, 1993); N. Oikonomidès, "Terres du fisc et revenu de la terre aux Xe–XI^e siècles," in *Hommes et richesses dans l'Empire byzantin*, 2 vols. (Paris, 1989–91), 2:321–37; E. Patlagean, *Pauvreté économique et pauvreté sociale à Byzance, 4^e–7^e siècles* (Paris–The Hague, 1977); P. Bellier et al., *Paysages de Macédoine: Leur caractères, leur évolution à travers les documents et les récits des voyageurs* (Paris, 1986); E. Schilbach, *Byzantinische Metrologie* (Munich, 1970); N. Svoronos, *Etudes sur l'organisation intérieure, la société et l'économie de l'Empire byzantin* (London, 1973); idem, "Remarques sur les structures économiques de l'Empire byzantin au XI^e siècle," *TM* 6 (1976): 49–67; J. L. Teall, "The Grain Supply of the Byzantine Empire, 330–1025," *DOP* 13 (1959): 89–139; idem, "Byzantine Agricultural Tradition," *DOP* 25 (1971): 35–59; J. P. Thomas, *Private Religious Foundations in the Byzantine Empire* (Washington, D.C., 1987); P. Toubert, *Les structures du Latium médiéval: Le Latium méridional et la Sabine du IX^e siècle à la fin du XII^e siècle*, 2 vols. (Rome, 1973); W. T. Treadgold, *The Byzantine Revival, 780–842* (Stanford, Calif., 1988).

² On the historiography of Byzantine "feudalism," see Harvey, *Economic Expansion*, 5–12.

most research, is presented as a golden age. Nevertheless, this view, which seems set to prevail, has not, in fact, been sufficiently taken into account in recent publications.

Over the last twenty years, a more concrete approach to the rural economy has been adopted, generally considering the economy within the framework of a history of land use and exchanges. This research has mostly been undertaken for thematic or regional studies, and has helped correct the previous abstract and pessimistic picture of the rural economy, replacing it with a vision that, while still piecemeal, is now more realistic. Furthermore, all recently published work, including syntheses, is based on documentation that is now better established, more abundant, and more diverse.

Certain facts, sufficient to indicate in which direction things were developing, may now be considered probable, though much is still uncertain. The texts require further examination and do not palliate the deficiencies of rural archaeology or the scarcity of paleogeographic, paleobotanical, and paleozoological studies on the territory of the empire. So few written texts have survived that we know very little about the first two centuries of the period under consideration and are obliged to reject a chronological approach that would have given them a role. As it is, we can only guess at the economic and social changes that affected the countryside, first as a result of the plague in the sixth century, and its subsequent recurrences until the mid-eighth century, and, second, due to the frequently insecure conditions that prevailed until the tenth century. However, we cannot assess the part played by the permanent features of the rural economy, although it must have been considerable. Some continuous features must have existed, if only on the level of agricultural methods, to explain how the state finally found the means of winning the war against first the Arabs and then the Slavs. Many more regional and multidisciplinary studies are required to substantiate the hypotheses and general statements that we necessarily resort to and that, even nowadays, are liable to miss the true face of reality.

Nevertheless, the few facts we do possess call for a reexamination of some prior analyses and for an attempt at describing the characters and modalities of a development in the rural economy, which, though certainly slow, was apparently continuous from the eighth to the beginning of the fourteenth century. The outline adopted here reflects the historiographical situation, which is characterized today more by our lack of knowledge than by any divergence of opinion. Too much data are missing to allow a picture of the Byzantine rural economy to be drawn or to trace its evolution between the seventh and twelfth centuries. The following comments constitute a provisional attempt at analyzing some of the circumstances of this evolution. We will begin by examining the conditions of production under their most general aspect, followed by the factors and forms of its development, insofar as they can be perceived at present.

The Conditions of Agricultural Production

Some features of the Byzantine rural economy emerge over a long time span that occasionally extends far beyond that of the empire. Previous descriptions have sometimes presented them as the factors or symptoms of stagnation or even of Byzantium's

backwardness in relation to its western and Arab neighbors, without actually taking into account the specific nature of the environment or the developmental factors that belonged to a long agricultural tradition.

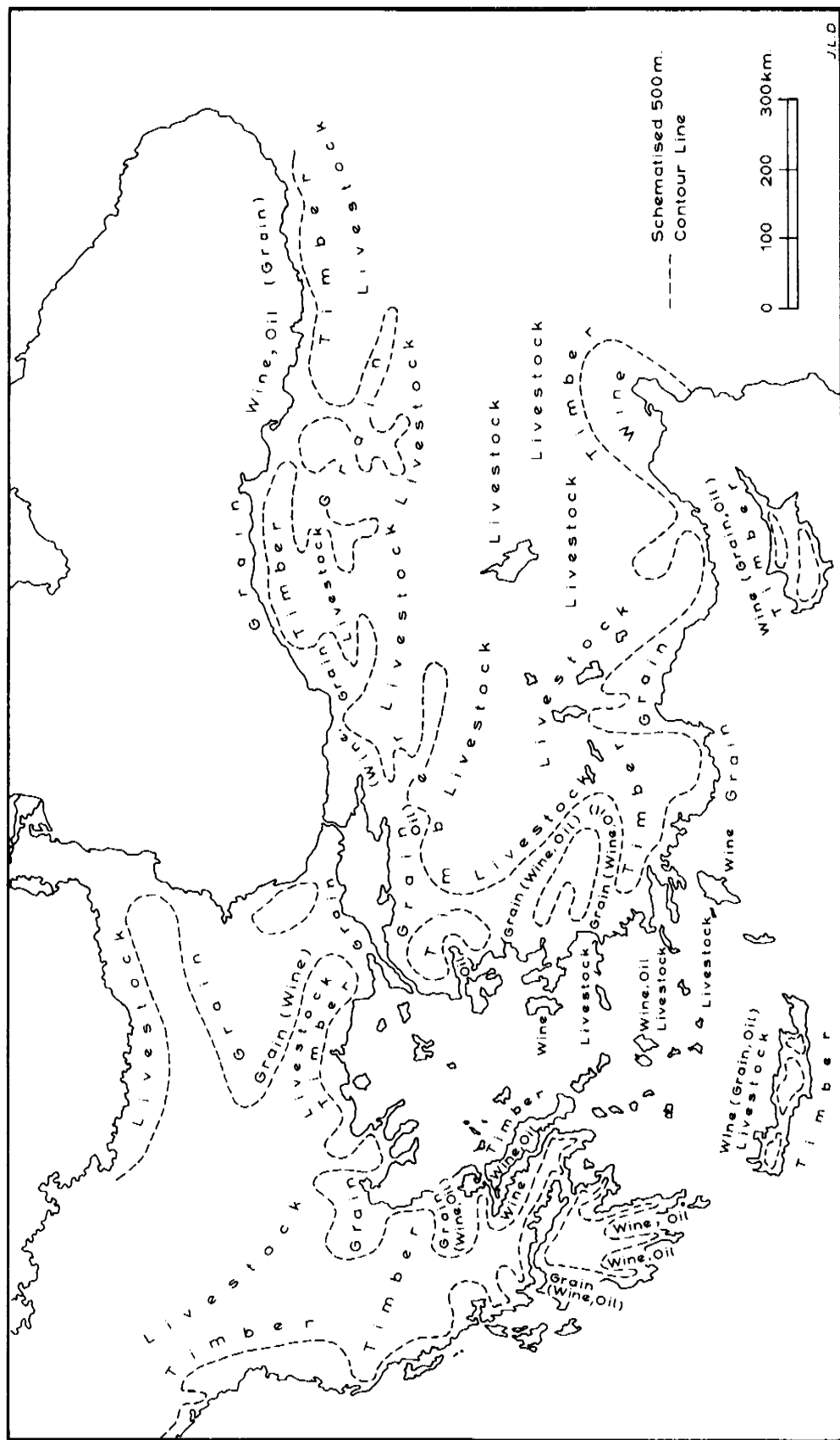
The geographical conditions of agricultural production in the eastern Mediterranean are presented in this volume by B. Geyer. Regions were variously suited to certain types of crops, but all, apart from those abutting the few arid steppes, possess and must have possessed at the time an overall level of rainfall adequate to ensure a generally successful dry crop farming system based on cereals and, in many places, on orchards and vines. The Byzantine rural economy developed in accordance with both the opportunities and the many natural restrictions that presented themselves, which, in turn, enable us to assess its effectiveness. In this respect, there is no point in contrasting Byzantine and Arab agriculture, as has been done, labeling the former as bound by routine when it was simply adapted to its geographical conditions, and the latter as innovative because based on irrigation,³ when the two regions are different, the one temperate and the other desertlike. It is probably far more useful to stress the way in which these diverse conditions explain in part the characteristic features of Byzantine agriculture and indeed of those systems that came before and after within the same geographical space. At the local level, this diversity favored polyculture together with stock raising, as was probably practiced in many regions, for some of which evidence is available. In itself, polyculture constituted a safeguard against disastrous weather conditions and was a component of social equilibrium. At the regional level, many medieval sources testify to a degree of specialization in relation to specific geographical and climatic circumstances, which allowed some sectors to concentrate on particular crops or stock raising whenever possible or necessary. Thus central Asia Minor, which is both cold and dry, has concentrated on stock raising over crop growing, up to the present day.

Areas close to the sea were relatively well favored; they frequently presented a greater diversity of natural conditions, featuring fluvial terraces which, though small, were easily cultivated and readily accessible, facilitating the commercialization of produce. The climate was milder and could also be more humid than elsewhere. These coastal regions appear to have played an important part in the development of the Byzantine economy. The map of land use ca. 1300 that Michael Hendy established (Fig. 1) illustrates the contrast between the coastal zones, featuring cereal crops, vines, and olive groves, and the interior of the Balkans and Asia Minor, which concentrated on stock raising. In its main features, this map is valid for the end of the period discussed here. Indeed, we know that the contrasts illustrated in it were already present during the Roman period, and many of these indicators can also be found in later centuries.⁴

The peasantry's tools are described in this volume by A. Bryer. He shows how little they changed through the ages and how rudimentary they were, relatively speaking, resulting in a low ratio of productivity to labor. Although our information about these

³ Kaplan, *Les hommes et la terre*, 68–69.

⁴ Hendy, *Studies*, 35–58.



1. The Balkans and Anatolia, basic agricultural/pastoral divisions and products to ca. 1300 (after M. F. Hendy, *Studies in the Byzantine Monetary Economy c. 300-1450* [Cambridge, 1985], 70, map 13)



2. The rich man scolds his wasteful steward (Luke 16:1–4). National Library, Athens, cod. 93, fol. 125 (late 12th century) (after A. Marava-Chatzinikolaou and C. Toufexi-Paschou, Κατάλογος μικρογραφιῶν βυζαντινῶν χειρογράφων τῆς Ἐθνικῆς Βιβλιοθήκης τῆς Ἑλλάδος [Athens, 1978], 1: pl. 643)

tools is mainly derived from miniatures and consequently not extensive, this picture remains persuasive. There is, however, a case for regarding the permanence of techniques and tools as evidence of their successful adaptation to the environment. This approach modifies the previous perception of a stagnating Byzantium, as compared with the sometimes overrated innovations of the medieval West, with its Atlantic outlook. For instance, the scratch plow or sole ard (rather than the western heavy plow) was alone appropriate for the generally shallow soils of the Mediterranean world.⁵ Moreover, some farms owned teams of buffalo,⁶ suggesting a capacity for plowing heavier soil than that usually farmed. The *Geoponika* already mentions plows that could cut more or less deeply, without providing further details.⁷

During the ninth and tenth centuries, tools in Byzantium appear to have contained much the same proportion of iron as in the West, iron obviously increasing their efficiency; indeed, there is no evidence that iron tools were not the norm, in subsequent periods as well.⁸ That significant iron- and metalworks were present throughout the countryside is suggested by traces of rural metallurgy in the Crimea, by the fairly frequent discovery of iron dross in the course of archaeological surveys in Macedonia and Bithynia, and by the references to smiths in the villages.⁹ Hoes were required for finishing off clearance work effected “by axe and by fire,” to use the words of a psalm quoted, appropriately enough, by Eustathios Boilas,¹⁰ and must also have been suitable for working small areas. Scratch plows seem to have been in general use for plowing fields, as we know from the fact that half of the peasants in Caria and Macedonia owned at least one ox at the end of the eleventh and beginning of the twelfth centuries—those who owned only one must have joined up with another in the plowing season.¹¹ When compared with working with a hoe, the use of harness and metal plowshares must have gained time for farmers, enabling them to carry out the repeated plowings that were required.

Water mills were used to grind grain and, though infrequent during the proto-Byzantine period, were already numerous by the twelfth century, possibly already by the tenth;¹² as with other improvements introduced in the Middle Ages, they saved

⁵ Teall, “Grain Supply,” 129; Patlagean, *Pauvreté économique*, 250; Kaplan, *Les hommes et la terre*, 48–50; Harvey, *Economic Expansion*, 123.

⁶ In the 11th century, near Miletos, cf. Ἐγγραφα Πάτμου, ed. M. Nystazopoulou-Pelekidou (Athens, 1980), 2: no. 50 (hereafter *Patmos*); for the same period, in Chalkidike, cf. below, p. 258.

⁷ *Geoponica sive Cassiani Bassi scholastici De re rustica eclogae*, ed. H. Beckh (Leipzig, 1895), 2.23.9; 3.1.10 (ἄροτρον μικρόν); 3.11.8 (βαθὺ ἄροτρον). For the date of this compilation, cf. below, p. 291.

⁸ Teall, “Agricultural Tradition,” 51; Harvey, *Economic Expansion*, 122–25; on central Italy, Toubert, *Structures*, 1:228–35.

⁹ *ODB*, s.v. “Iron” (for Crimea).

¹⁰ Will of Eustathios Boilas, ed. Lemerle, *Cinq études*, 22.

¹¹ In the accounts drawn up by one Georgian steward at Iveron, at least, the *boidatoi* were grouped in pairs for the purpose of paying the *zeugologion*; *Actes d'Iviron*, ed. J. Lefort, N. Oikonomides, and D. Papachryssanthou, Archives de l'Athos, 4 vols. (Paris, 1985–95), 2:286–99 (hereafter *Iviron*). *Vie de Philarète*, ed. M. H. Fourmy and M. Leroy, *Byzantion* 9 (1934): 121, also suggests that plowing required a plow team (although this does not exclude the possibility that surface plow was performed with a single ox).

¹² Harvey, *Economic Expansion*, 128–33; Kaplan, *Les hommes et la terre*, 53–55.

time for productive work. The water for mills flowed along channels that were dug into rock or constructed (sometimes along stretches more than a kilometer long) and also served to irrigate gardens; once in place, these difficult and laborious constructions were used for centuries. The frequency with which mills and adjacent gardens are mentioned in texts serves to underline the very real importance of irrigation in Byzantium, as discreetly placed in the landscape as it was.¹³ Though not a necessity and not spread over large expanses, irrigation did constitute an appreciable resource.

Thus, though the explanation for the development of the Byzantine rural economy is not to be found in technical advances, the tools available to Byzantine farmers cannot be said to have impeded this development.¹⁴ At the same time, the diffusion of iron tools and the multiplication of certain improvements, including mills, as well as the many paths that were made during the Middle Ages from village centers to outlying lands (these radiating lines can be spotted on maps with a scale of 1:50,000), only served to increase the farmers' productivity.

The Social Organization of Production

Village and Estate, Small Landholders and Tenant Farmers During the whole of the period under discussion, the social organization of production was arranged round two poles, which, following Byzantine usage, can only be called estate and village, in spite of the imprecise and frequently ambiguous nature of these terms. The equilibrium between these two poles did alter, when the village and its communal economy (which seem originally to have been preponderant) were replaced by a predominantly domanial economy (known as seigneurial in the West).¹⁵ The present attempt at analyzing the various aspects of these two organizational forms, which are still obscure, begins by dismissing certain concepts that have given rise to outdated interpretations. These include, for instance, the definition of a village as a collection of free smallholders; the principle by which smallholdings are viewed as factors of prosperity; the assimilation of the large estate to a lazily managed *latifundium*; and the perception of the transformation of villages into estates as a process that reduced the peasant population to serf status. All these notions have now been relegated to the realm of historiography. Instead, I would stress the duality of village and estate, on the one hand, and the predominance of peasant smallholdings in terms of units of exploitation, on the other, as permanent features of the Byzantine rural economy and factors of progress.

The terms for village (*kome*, *chorion*) and estate (often *proasteion*, *ktema*) designated changing realities and cannot be defined independently of a particular context. They enable us to make distinctions, in any given period, among the various methods of soil

¹³ Harvey, *Economic Expansion*, 144; ODB, s.v. "Irrigation."

¹⁴ For the tools of southern Italy, see J.-M. Martin, "Le travail agricole: Rythmes, corvées, outils," in *Terra e uomini nel Mezzogiorno normanno-svevo* (Bari, 1987), 113–57.

¹⁵ On great properties in the West, see P. Toubert, "La part du grand domaine dans le décollage économique de l'Occident (VIIIe–Xe siècle)," in *La croissance agricole du Haut Moyen Age* (Auch, 1990), 53–86.

appropriation (unlike *chorion*, *proasteion* belonged to a person, whether state, church, or layman), divisions of space (the word *chorion* designated in this case the village territory on which could be found *proasteia*), or dwelling places (in which case *chorion* was a village, often presumed, rightly or wrongly, to have been a clustered habitation, and *proasteion* could correspond to a hamlet). As forms of land use, estate and village both complemented and opposed each other; in fact, they lived off each other, for instance, because the former was often based on the latter's territory and some villagers secured land or employment on the estate, though converse arrangements were not excluded. The dialectics of village and estate were dramatized in the tenth century in the Byzantine emperors' novels, for fiscal or possibly political reasons (when the emperors feared a revolt by the great landowners of Asia Minor). This dramatization has been seized on by historians who described the "feudalization" of the empire in order to emphasize the importance of the struggle in which great landowners and peasants were obviously engaged, time and time again. This duality is important, though for other reasons. It meant that the workforce could be employed to best effect, with workers moving fairly freely between one context and the other. Over time, it also played a role in the development of the economy, since, as will be seen, the village social structure was the organizational form best adapted to insecure conditions, with the estate fulfilling this role once conditions were safe again. In parallel with this process, however, the functions of *chorion* and *proasteion* also changed; the former, often headed by a domanial organization, was reduced simply to a form of habitation, and the estate became principally a unit of management. The modalities of these changes will be discussed later.

Whatever the status of land or men, the condition of peasants was on the whole comparable both in the villages and on the estates, with many individuals acquiring fairly early the enviable position of smallholder.¹⁶ There was in principle a clear distinction between tenants who lived on the estates (their status as *paroikoi* was stable, and they owed dues to the master of the place) and the village inhabitants, many of whom owned land and consequently paid taxes to the state. This distinction, however, highlights a more complicated reality; not all the cultivators on the estate lived there, and not all enjoyed a special status. Some of them, whether slaves or wage laborers, lived there from legal or economic necessity, whereas other domanial cultivators lived in a village, because they either held short- or long-term leases or were simply wage laborers. In the same way, the inhabitants of a village would not all be landholders, and of these, not all would be farmers. Some village proprietors held the lowest rank of aristocratic status and were wealthier than tenant farmers, whose condition was no more uniform than theirs.

While proprietors certainly enjoyed a more dignified status than tenant farmers, since landowning villagers were in direct relation to the state, this did not always constitute an advantage for them or for the rural economy. The protection of a powerful landowner could be useful rather than inconvenient, whereas the state was remote and only periodically capable of aiding threatened landholders. Though tenant farmers

¹⁶ Patlagean, *Pauvreté économique*, 239–46.

might generally have had to pay heavier charges than village proprietors (rents were in theory twice as high as the land tax), the many other factors involved are difficult to assess. Villagers, for instance, did not benefit from the fiscal exemptions available to peasants on an estate.

For a long time it was thought that the tenth and eleventh centuries were a period when Byzantine peasants were reduced to serf status, because so many of them ceased being landholders and became *paroikoi*. Nowadays we know that this is not the correct interpretation. First of all, we need to stress that the term *paroikos* was used, from the mid-eleventh century, to designate not only tenant farmers but also landholders who paid taxes not to the state but to a third party.¹⁷ This semantic change not only stresses inversely the honor conferred on those who were in direct relation with the state, if only by paying taxes, but also shows that owning land was not a socially discriminating factor. Furthermore, the condition of *paroikoi* tenants improved during this period. Although their legal status was never precisely defined,¹⁸ *paroikoi* were considered by Byzantine jurists as the heirs of the proto-Byzantine *coloni*, capable of owning movable property and, after thirty years (duration of legal prescription), of securing tenant status (*misthotos*). They continued to be tied to the soil, which they were obliged to cultivate and on which they paid dues (*telos*). In the tenth century, Kosmas Magistros gave a ruling that still emphasized that *paroikoi* had no rights over the property they rented and that they could not alienate or transmit it,¹⁹ although it is not clear, in this case any more than in so many others, whether reality conformed to the law or even to Kosmas' interpretation of it. In the eleventh century, Eustathios Rhomaios gave a more realistic judgment when he asserted that *paroikoi* could not be driven from their land after thirty years; they were then considered "like the masters" (like *possessores*, with rights similar to those of landowners), on condition that they paid their rent.²⁰ Lemerle has shown that this was an important shift, since *paroikoi* were initially considered tied to the land, with no rights over it; they were henceforth acknowledged to possess, if not ownership rights, at least the right to pass on their farm.²¹

The distinction between landholder and tenant farmer was weakened once tenures held by *paroikoi* were considered hereditary and once some *paroikoi* achieved owner status. Some documents suggest that *paroikoi* did own some of the lands they farmed, possibly by the eleventh century and definitely in the twelfth.²² During the following centuries, the majority of *paroikoi* had come to own at least a few parcels of land, although this was less often the case where the whole tenure was concerned. The features

¹⁷ Cf. *Iviron*, 2:83–84.

¹⁸ Lemerle, *Agrarian History*, 166–87.

¹⁹ G. Weiss, "Die Entscheidung des Kosmas Magistros über das Parökenrecht," *Byzantion* 48 (1978): 477–500; N. Svoronos, *Les nouvelles des empereurs macédoniens concernant la terre et les stratiotes*, ed. P. Gounaridis (Athens, 1994), 246–47.

²⁰ *Peira*, 15.2 and 3, in Zepos, *Jus*, vol. 4.

²¹ Lemerle, *Agrarian History*, 179–81.

²² N. Oikonomides, "Η Πείρα περί παροίκων," in *Ἀφιέρωμα στὸν Νίκο Σβορώνο*, ed. B. Kremmydas, C. Maltezou, and N. M. Panagiotakes (Rethymnon, 1986), 1:232–41.

of this complex evolution are clear: as life became safer, Byzantine peasants gradually put down roots, even on estate lands. In itself, this process is a sign of economic growth.

Combing the Byzantine texts would probably reveal as many villagers in hiding to avoid paying tax as *paroikoi* who had absconded to avoid paying their dues.²³ Indeed, irrespective of these fiscal evasions, the mobility of peasants, whatever their status, was directly related to their degree of poverty, which was often great. Unsafe conditions meant that there was more mobility at the beginning of our period than later on, but it never ceased. The important element here is that some taxpaying landholders tried to establish themselves on estates, a move they would not have attempted had the status of *paroikos* been worse than their own. This situation was not unusual in the tenth century, precisely at a time when village and estate economies were in competition. In 947 Constantine VII issued a novel that considered the case of a soldier who was also a peasant proprietor, who was thought to have set himself up on an estate as a *paroikos*, possibly because he had sold his land.²⁴ Two documents issued in 974 and 975 by an official, the *ek prosopou* Theodore Kladon, referred to villagers in Macedonia who had sought refuge on lay or ecclesiastical estates to avoid their fiscal obligations. Theodore Kladon had been charged by the emperor to find them and recover the tax they owed the state.²⁵ These examples tend to confirm that the condition of *paroikos* was not always worse than that of villager.

Although Ostrogorsky insisted that *paroikoi* were legally tied to the soil,²⁶ this notion is not clearly defined; the head of the tenure could not avoid the obligation to cultivate the land, nor could one of his heirs after him,²⁷ but the other members of his family were not tied to the landowner. Furthermore, in the fourteenth century, some *praktika* registered as *paroikoi* of an estate peasants who in fact owned land there and paid the tax to the master of the estate, although they did not live on it; their obligations were thus strictly fiscal, since nothing appears to have prevented them from living elsewhere. In this matter, as in others, one can certainly discern the traits of an evolution about which little is known, but that was moving in the direction of greater freedom, not increased serfdom.

In the same way, the process whereby status had been transmitted through inheritance since the late Roman Empire tended to blur the difference between peasants in villages and on large properties, seen by historians as respectively “free” and “dependent,” albeit without specifying the nature of this freedom (the condition of village

²³ In the case of the *paroikoi*: Ignatios of Nicaea, M. Gedeon, Νέα βιβλιοθήκη ἐκκλησιαστικῶν συγγραμμάτων, vol. 1.1 (Istanbul, 1903), cols. 1–64, letter 3 (see now *The Correspondence of Ignatios the Deacon*, ed. C. Mango [Washington, D.C., 1997]); *Patmos*, 2: no. 50; *Iviron*, 2: no. 33; for the 13th century, see A. Soloviev, “Un inventaire de documents byzantins de Chilandar,” *Annales de l'Institut Kondakov* 10 (1938): 31–47, no. 21–24; for the 14th century, see G. Ostrogorski, *Quelques problèmes d'histoire de la paysannerie byzantine* (Brussels, 1956), 37–38.

²⁴ Svoronos, *Novelles*, p. 125.

²⁵ *Actes de Lavra*, ed. P. Lemerle, A. Guillou, N. Svoronos, and D. Papachryssanthou, Archives de l'Athos, 4 vols. (Paris, 1970–82), 1: no. 6 (hereafter *Lavra*); *Iviron*, 1: no. 2.

²⁶ Ostrogorski, *Quelques problèmes*, 68.

²⁷ Laiou-Thomadakis, *Peasant Society*, 142–57.

soldier was hereditary, for one) or this dependence (given that these peasants were legally free). Finally, and above all, the distinction between villagers and *paroikoi* blurred from the eleventh century on when whole villages were progressively transformed into estates without, apparently, the inhabitants' economic condition being adversely affected, since rural society grew stronger in this period.²⁸ This is why it seems legitimate, when studying the conditions of agricultural production, to treat the farming world, if not the whole peasant world, as a unit, irrespective of the different statuses held by the cultivators and even though levies on tenant farmers were theoretically heavier (see below) than the taxes paid by landowning peasants.

Peasant farms played a preponderant role in agricultural production, even on estate lands, as N. Svoronos has shown in an article published in 1956.²⁹ This means that, before describing peasant farms, we need to look at the way estates were exploited.

The Exploitation of Estates Although much is still uncertain, it does seem that estates were often exploited indirectly from the ninth century on. Estates came in very different sizes. Some were in sectors that could be fully cultivated and were not much larger than some peasant holdings. Others, however, were sometimes far greater than the territory of a village and included mountainous or uncultivated zones. By the end of our period, the directly managed part of the estate often comprised grazing lands or forests, with the arable land nearly always rented out.

Estate owners often lived in town; this practice is attested in the *Geoponika*, where it is deplored, and it prevailed from the eleventh century on. However, such had not always been the case during the intervening period.³⁰ The landowner owned the master's house on his lands, in which his agent, at least, lived; the house often constituted the center of an agricultural unit. This was apparently the case at the beginning of the seventh century with regard to the farm of Shelomi in Palestine, which has been excavated. This farm was dependent on a monastery and formed a small courtyard surrounded by rooms, of which one was carefully decorated and the others were storerooms.³¹ At the end of our period, the master's house, which was sometimes called *kathedra* on lay estates and always *metochion* on monastic estates,³² is fairly well known from descriptions in several documents from the end of the eleventh and the beginning of the twelfth century. These houses were sometimes fortified and formed courtyards surrounded by buildings, comprising dwellings and workplaces (kitchen and bakery), a stable, and other structures, such as storerooms, granaries, and barns, which

²⁸ Séminaire de l'Ecole Pratique des Hautes Etudes, "Anthroponymie et société villageoise (Xe–XIVe siècle)," in *Hommes et richesses* (as above, note 1), 2:225–38.

²⁹ N. Svoronos, "Sur quelques formes de la vie rurale à Byzance: Petite et grande exploitation," *Annales ESC* 11 (1956): 325–55 = Svoronos, *Etudes* (as above, note 1), art. 2.

³⁰ *Geoponika*, 2.1; *Palladius, Traité d'agriculture*, ed. R. Martin (Paris, 1976), 1:80–81; *Vie de Philarète*, 135–37; Haldon, *Seventh Century*, 157.

³¹ C. Dauphin, "Une propriété monastique en Phénicie maritime: Le domaine agricole de Shelomi," in *Ἀφιέρωμα* (as above, note 22), 1:36–50.

³² In other contexts, the term *metochion* indicates a monastic estate.

would have held the produce of the estate farm and dues paid in kind. *Metochia* also included a church.³³

Direct forms of exploitation were carried out by employees and, at least from the eleventh century on, through the “services” owed by peasants living on the estate.³⁴ At the beginning of our period, the agricultural production of the domanial farm was probably less marginal than was subsequently the case: the *Geoponika* (albeit based on a 3d-century text and without specifying a location) refers to brigades of laborers, workers, *coloni*, and slaves, who hoed the soil to a rhythm set by a supervisor.³⁵ This conveys a wholly different picture of the domanial economy than that alluded to in medieval texts, but this form of exploitation may have persisted in various places for a while.

References to slaves and wage laborers on domanial lands suggest, while not in themselves proving, the existence of a significant level of direct farming in the earliest periods. At the end of the eighth century, the Life of St. Philaretos mentions only numerous “servants” (*oiketai*) on the holy man’s domains in Paphlagonia.³⁶ During the second half of the ninth century, the famous widow traditionally named Danelis owned “a part of the Peloponnese that was not small” and thousands of slaves, many of whom may have merely held domestic roles or done artisan work,³⁷ while others may have worked on the land. Also in the tenth century, lands belonging to the emperor, “to *archontes* or other persons,” were probably exploited by slaves,³⁸ but these slaves could be established on a piece of land, as was the case with the *douloparoikoi* of Macedonia in the ninth to eleventh centuries.³⁹ In the tenth century or a bit later, the *Fiscal Treatise* also refers to the presence of slaves, wage laborers, “and others,” without specifying the work performed by each of these categories.⁴⁰ Despite their lack of precision, such

³³ *Patmos*, 2: nos. 50 (1073) and 52 (1089); *Iviron*, 2: no. 52; C. Giros, “Remarques sur l’architecture monastique en Macédoine orientale,” *BCH* 116 (1992): 409–43; P. Magdalino, “The Byzantine Aristocratic *Oikos*,” in *The Byzantine Aristocracy, IXth to XIIIth Centuries*, ed. M. Angold (Oxford, 1984), 92–111; Harvey, *Economic Expansion*, 188–89.

³⁴ In 1077, for instance, the *Diataxis* of Michael Attaleiates (“La *Diataxis* de Michel Attaliate,” ed. P. Gautier, *REB* 39 [1981]: 73) refers to *douleiai* owed by *paroikoi*. There is good evidence during our period for *corvées* (*aggareiai*), due initially to the state, then to the owners of estates, and which were often 12 or 24 days per year; they could be used for plowing the land, as in *Actes de Chilandar*, ed. L. Petit and B. Korablev, (= *VizVrem* 17 [1911]; repr. Amsterdam, 1975), no. 93, in 1323; cf. A. Stauridou-Zaphraka, “Η ἀγγαρεία στὸ Βυζάντιο,” *Byzantina* 11 (1982): 23–54; *ODB*, s.v. “Corvée”; and A. E. Laiou, “The Agrarian Economy, Thirteenth–Fifteenth Centuries,” *EHb* 328ff. For central Italy, see Toubert, *Structures*, 1:465–73.

³⁵ *Geoponika*, 2.45.5.

³⁶ *Vie de Philarète*, 115.

³⁷ *Theophanes Continuatus*, ed. I. Bekker (Bonn, 1838), 319.

³⁸ Novel 38 issued by Leo VI (*Les Nouvelles de Léon VI le Sage*, ed. P. Noailles and A. Dain [Paris, 1944]) refers to these slaves but does not specify their occupation. The same Leo VI freed 3,000 slaves belonging to Danelis and sent them to cultivate lands in Longobardia: *Theophanes Continuatus*, 321.

³⁹ N. Oikonomides, “Οἱ βυζαντινοὶ δουλοπάροικοι,” *Σύμμεικτα* 5 (1983): 295–302; *ODB*, s.v. “Doulouparoikos,” “Slavery.”

⁴⁰ *Fiscal Treatise*, ed. F. Dölger, *Beiträge zur Geschichte der byzantinischen Finanzverwaltung besonders des 10. und 11. Jahrhunderts* (Leipzig–Berlin, 1927; repr. 1960), 115. The date of the *Fiscal Treatise* has not been established; it is later than the beginning of the 10th century, but no later than the 12th century.

references, which are plentiful,⁴¹ suggest that slaves had played an important part in the domanian economy since the seventh century, and increasingly so following the Byzantine reconquests.⁴² However, nothing specific is known about their function; they assisted the master of the place or his agent in all sorts of ways in the business of managing the estate. Further mentions of slaves occur in the eleventh century when they were freed, and they disappear from the sources after the twelfth century.⁴³

References to wage laborers also occur continuously from the seventh century⁴⁴ to the end of the Byzantine period. The number is never specified, and their occupation only rarely; they can be woodcutters, shepherds, or millers and employed in agricultural work on a seasonal or permanent basis. In 1089, for instance, an estate belonging to St. John of Patmos on the island of Leros included a house for agricultural workers about whom nothing is known, and another that was kept for some *paroikoi*, who were no better established than the others, since they lived together and did not possess houses of their own.⁴⁵ In the same way, the status of wage laborer (like that of slave) could constitute a transitional stage in a process leading to a more stable condition.⁴⁶ To sum up, at least by the end of the period under consideration, wage laborers, as a category of the rural workforce, did not play a decisive role in agricultural production. The overall impression is that the direct management of the demesne required an increasingly smaller workforce.

From the tenth century on, in fact, our information about agricultural exploitation proper to the demesne suggests that it was limited. In Byzantine Apulia, judging by the situation during the Lombard and Norman periods, the cultivated reserve was insignificant, even nonexistent.⁴⁷ In eastern Anatolia, in the mid-eleventh century, on the lands of the *protospatharios* Eustathios Boilas, all the farmland seems to have been divided up into tenures and let out for rent (*pakton*), some of it to Boilas' freed slaves.⁴⁸ The same situation may, or may not, have existed in 1077 on the domains of Michael Attaleiates in Thrace near Rhaidestos, which were farmed by *paroikoi* and by short-term leaseholders (*ekleptores*), who (the former at least) owed the landowner "services."⁴⁹ In the same way, a reference in 1083 to plow teams belonging to the master (*despotika zeugaria*), coupled with a mention of wage laborers on the estates of the *megas domestikos*

⁴¹ Cf. Teall, "Agricultural Tradition," 53.

⁴² Cf. *Ioannis Skylitzae Synopsis historiarum*, ed. I. Thurn (Berlin–New York, 1973), 250 (hereafter Skylitzes).

⁴³ Oikonomides, "Δουλοπάροικοι" 298; G. Ostrogorskij, *Pour l'histoire de la féodalité byzantine* (Brussels, 1954), 297. In 1073 on the estate of Baris in the region of Miletos, no slave could be mentioned "for they are dead" (*Patmos*, 2: no. 50).

⁴⁴ P. A. Yannopoulos, *La société profane dans l'Empire byzantin des VIIe, VIIIe et IXe siècles* (Louvain, 1975), 199.

⁴⁵ *Patmos*, 2: no. 52.

⁴⁶ Thus in 1300 the estate of Xenophon at Stomion in Chalkidike was cultivated by wage laborers (προσκαθήμενοι μίσθαρνοι) installed there, who became *paroikoi* prior to 1318: *Actes de Xénophon*, ed. D. Papachryssanthou, Archives de l'Athos (Paris, 1986), 128.

⁴⁷ Martin, *La Pouille*, 205, 306–7 (there are no data for the Byzantine period).

⁴⁸ Lemerle, *Cinq études*, 59–60.

⁴⁹ Cf. above, note 34; Kaplan, *Les hommes et la terre*, 350.

of the West, Gregory Pakourianos, at Petritzos in Bulgaria, also suggests that a proportion of the cultivated part of the estate was directly farmed, although this is not certain.⁵⁰ As it is, we do have evidence for direct exploitation at Baris, near Miletos, in 1073 (see below), and this appears to be the case in the first decade of the twelfth century at Radolibos, a large village in Macedonia that became a domain of Iveron, and which will frequently be alluded to below. Here, however, the nineteen master's fields (*choraphia despotika*, 100 modioi in all, ca. 12.5 ha)⁵¹ represented only 3% of all the fields that were part of this village, the rest being owned and farmed by *paroikoi*. It is debatable whether these "despotic" fields were not simply parcels of land whose tenures lapsed periodically, in certain circumstances, only to be renewed, in which case the principal function of domanial exploitation would have been to manage them on a provisional basis. In fact, seven of these nineteen fields were not directly farmed, but were apparently let on short-term leases to some of the monastery's *paroikoi*.

During the same period, an item about seed (150 modioi), in the accounts kept by the Georgian steward on this estate, confirms the existence of the domanial farm, which was no larger than three of the 122 peasant farms on the same estate put together and had no great economic significance.⁵² While the area under cultivation was sometimes greater, the direct exploitation of arable land on the estate generally seems to have become marginal.⁵³ From the tenth century on, at least, the agent managed only part of the *incultum* directly and left the exploitation of arable land to the peasants. As it is, attempts to illustrate the history of the "feudalization" of the empire by contrasting the small area of arable land meanly left to the *paroikoi* with the huge expanse (mostly uncultivated land) reserved for the master of the estate, have proved quite meaningless, given the very different use of the soil in either case.⁵⁴

Peasant Farms Consequently, the greater part of the arable land, whether in the context of estate or village, is reckoned to have been cultivated within peasant holdings by the family head with the help of his wife and children, who constituted a hearth. The peasant family retained rights over their farmed land that were often hereditary. This institution may have been confirmed at the beginning of our period, as a result of the stable status of certain tenants during the proto-Byzantine period, and was reinforced first by the Roman right of succession and then by the canonical right of

⁵⁰ Lemerle, *Cinq études*, 189.

⁵¹ This ratio may generally be allowed: 1 ha = 10 modioi. This is only an average of the various values for the *modios* established by Schilbach, *Byzantinische Metrologie*, cf. his index, s.v. "Modios" (888.7 m², 939.2 m², 1,279.8 m²). In Macedonia, the modios seems to have comprised around 1,250 m²: *Géométries du fisc byzantin*, ed. J. Lefort et al. (Paris, 1991), 263.

⁵² *Iviron*, 2:253.

⁵³ In 1323 at Mamitzon near Constantinople, the Chilandar monastery held in exclusive possession 600 modioi of land plowed by the corvées of *paroikoi*, that is 15% of the entire area (3,912 modioi): *Chilandar*, no. 92, for 1323: for the 11th century, see comments by Svoronos in "Structures économiques," 51–56 and, for the 13th to the 15th centuries regarding this document in particular, see Laiou, "Agrarian Economy," 322ff.

⁵⁴ Cf. for instance *ODB*, s.v. "Demesne."

marriage.⁵⁵ It was then extended to rural slaves who had gained their freedom. Evidence for this is provided, for instance, by the houses of landowners or tenants, on the limestone massif of northern Syria up to the seventh century,⁵⁶ and also by the saints' lives and documents. The persons who made up a hearth represented only part of the biological family; some children were obliged as adults to leave the house, the girls to marry and the boys to find employment elsewhere as soldiers, for instance, or to start up another farm. Macedonia is the only place in the early fourteenth century where the composition of hearths and the demographic comportment of families, as well as their modest strategies to safeguard both their farms and the position of members separated from the hearth, may be deduced from surviving *praktika* that contain precise hearth counts and form valuable series.

Angeliki Laiou has thus been able to establish that a young couple would have between three and four surviving children around 1300,⁵⁷ which evokes a form of demographic behavior typical of the preindustrial age, one that enabled the population to grow at a significant natural rate, at least in the absence of recurrent catastrophes.⁵⁸ Of 164 hearths counted in 1301 on the properties of Iveron in the Thessalonike region, during a period of strong demographic pressure, the registered population comprised an average of 4.9 persons per hearth, and an average of 4.7 persons on the properties of the Athonite monastery of Lavra.⁵⁹ The number of persons that a farm could feed was obviously related to the available means of cultivation; on the properties of Iveron it was very high among the few peasants who possessed two plow teams (7.5 persons, or 1.9 per ox), high too in hearths with only one team (5.6 persons, or 2.8 per ox) or a single ox (5.1 persons), and less with those who owned no oxen (4.1 persons).⁶⁰ These figures show that hearth populations were not in direct proportion to the number of draft animals, since the best-supplied peasants in this respect had relatively fewer mouths to feed, an economically significant fact that will be explored below. A *praktikon* dating from 1103 suggests that the structure of hearths at Radolibos was the same then as in the fourteenth century;⁶¹ numbers may have been slightly less, given the lighter demographic pressure. Eleventh-century lists of peasants give few details; it is clear only that hearths were already organized around a couple and their children.⁶² With regard to earlier periods, there are only scattered examples, such as a prosperous

⁵⁵ Patlagean, *Pauvreté économique*, 114–18; Kaplan, *Les hommes et la terre*, 483–84; ODB, s.v. "Family."

⁵⁶ G. Tate, "Les campagnes de la Syrie du Nord à l'époque proto-byzantine," in *Hommes et richesses* (as above, note 1), 63–77.

⁵⁷ Laiou-Thomadakis, *Peasant Society*, 72–107, 290.

⁵⁸ Along the same lines, at the beginning of the period studied, Patlagean, *Pauvreté économique*, 145–55.

⁵⁹ *Iviron*, 3: no. 70; *Lavra*, 2: no. 91. For the registration of small children in the *praktika*, see Lefort, "Radolibos," 205, n. 46 (bibliography).

⁶⁰ According to *Iviron*, 3: no. 70.

⁶¹ *Iviron*, 2: no. 51; Lefort, "Radolibos," 202–5.

⁶² *Iviron*, 1: no. 30; *Patmos*, 2: no. 50, and, on the list of *paroikoi* contained in this document, G. Litavrin, "Family Relations and Family Law in the Byzantine Countryside of the Eleventh Century: An Analysis of the Praktikon of 1073," *DOP* 44 (1990): 187–93.

farmer's hearth in 897 that comprised five persons: the widow of the head of family and four of his sons (one daughter had become a nun and two sons monks).⁶³

Peasant houses have not been studied much⁶⁴ and are not systematically mentioned, except in the fourteenth century by the compilers of certain *praktika*. However, they had always constituted the farm center.⁶⁵ In both villages and estates, these houses were sometimes rudimentary, especially in the case of herdsmen; in the tenth century in Chalkidike, a document alludes to the encampments (*kataskenoseis*) of *paroikoi* (who were certainly swineherds), which were probably little different from those set up by Slavs close to Thessalonike in the seventh century, or from those belonging to Vlach stockbreeders, who settled near Strumica at the beginning of the fourteenth century, which together formed a *katouna*.⁶⁶ Several texts show how, in the tenth to twelfth centuries, even the houses of agriculturists could be taken down and rebuilt elsewhere, once the main wooden struts had been transported.⁶⁷ Local materials, traditions, and degrees of wealth all played their part in contributing to a diversity of building forms at which we can only guess. In every instance, the peasants' houses had to be large enough to take in, besides the people, their cattle, crops, and tools. Some of them were rectangular,⁶⁸ but others, perhaps the majority, were built along the lines of a model that persisted throughout the Ottoman Empire to the twentieth century and were organized around a courtyard, though naturally not as grand as that attached to masters' houses.⁶⁹ One may suspect that this courtyard (*aule*), as an organizational structure for the inhabited space,⁷⁰ was, unlike streets in Hellenistic towns, a feature of the rural world that, according to many documents, was sometimes established even in the very center of Byzantine towns. In the countryside, the majority of houses were surrounded by a piece of ground featuring vegetable plots and the occasional tree.

Our knowledge of peasant farms between the eleventh and fourteenth centuries is derived from fiscal documents, which reveal that they included, on average, not a plow team as was sometimes thought,⁷¹ but a single ox. This was, for instance, the case at the beginning of the twelfth century at Radolibos, where an average of 0.8 ox per cul-

⁶³ *Lavra*, 1: no. 1.

⁶⁴ Ch. Bouras, Κατοικίες καὶ οἰκισμοὶ στὴν βυζαντινὴ Ἑλλάδα," in Οἰκισμοὶ στὴν Ἑλλάδα, ed. B. Doumanis and P. Oliver (Athens, 1974), 30–52; idem, "Houses in Byzantium," Δελτ.Χριστ.Ἀρχ.Ἐτ. 11 (1982–83): 1–26; S. Ellis, "La casa," in *La civiltà bizantina, oggetti e messaggi*, ed. A. Guillou (Rome, 1993), 167–226.

⁶⁵ In a 10th-century fiscal instruction, the term *oikema* indicates a peasant holding: *Géométries*, § 54.

⁶⁶ *Iviron*, 1: no. 9; V. Popović, "Note sur l'habitat paléoslave," in *Les plus anciens recueils des Miracles de Saint Démétrius*, ed. P. Lemerle (Paris, 1981), 2:235–41; *Chilandar*, no. 13.

⁶⁷ J. Lefort, "En Macédoine orientale au Xe siècle: Habitat rural, communes et domaines," in *Occident et Orient au Xe siècle* (Paris, 1979), 256–57.

⁶⁸ As in the Mani, Kaplan, *Les hommes et la terre*, 122; *ODB*, s.v. "Houses."

⁶⁹ On northern Syria, see J.-P. Sodini and G. Tate, "Maisons d'époque romaine et byzantine (IIe–VIe siècles) du Massif Calcaire de Syrie du Nord: Etude typologique," in *Colloque Apamée de Syrie, Bilan des recherches archéologiques, 1973–1979* (Brussels, 1984), 377–93; on Macedonia, see L. Schultze, *Makedonien Landschafts- und Kulturbilder* (Jena, 1927); Lefort, "Habitat rural," 256.

⁷⁰ At Radolibos in the 20th century, traffic sometimes circulates by passing from one courtyard to the next.

⁷¹ Kaplan, *les hommes et la terre*, 195, 500.

tivator was the norm; peasants who owned one ox (*boidatoi*) formed the largest group (39 of 126 peasants), followed by those who did not own a draft animal (38 *aktemones*), then those who possessed a team (32 *zeugaratoi*), and finally donkey owners (17 *onikatoi*), who were perhaps more involved in transportation than agriculture.⁷² An identical situation prevailed at the end of the eleventh century on the estates of Baris, where 51 peasants owned a total of 44 oxen (an average of 0.9 ox).⁷³ In some cases, *paroikoi* who had no draft animals used those belonging to the estate owner, involving contracts about which nothing is known.⁷⁴ As well as his ox, the average peasant (in Thessalonike at the beginning of the 14th century; there are few earlier data) would have owned a cow, a pig, and four goats or sheep, a total of seven head,⁷⁵ not counting poultry, which was not listed on censuses. These figures do not take much account of the way some farms specialized in stock raising. For instance, in the region of Thessalonike at the beginning of the fourteenth century, the *paroikoi* of Lavra who kept sheep (20%) owned on average 30 head, and one of them owned 300 head.⁷⁶ They were probably allowed to pasture their sheep on the monastery's fields in return for dues. These figures suggest that all peasant holdings included livestock, which made a significant contribution, as a source of both food and manure. Indeed, this is the picture drawn by the *Farmer's Law*, which may have reflected legal practice in villages during the seventh and eighth centuries;⁷⁷ village herds could even grow so large that their owners would have to employ a stockman to bring them to pasture.⁷⁸

Though peasants did not monopolize apiculture (Philaretos the Merciful owned 250 hives), small farms appear to have been more involved in this activity than larger ones.⁷⁹ Beekeeping was a sure means of profit, since honey was the sole source of sugar and wax the principal source of candles. At the beginning of the fourteenth century, the *paroikoi* of Lavra in the region of Thessalonike owned on average two hives each; 14% owned an average of fourteen hives and one *paroikos* owned sixty.⁸⁰ A tenth-century document⁸¹ suggests that hive transhumance was probably practiced in the

⁷² *Iviron*, 2: no. 51; in the 14th century, on the estates of Iveron in the Thessalonike region, 167 oxen for 164 *paroikoi*. The *paroikoi* of Lavra in the same region and during the same period were less well equipped than those of Iveron (0.4 oxen on average): cf. Laiou-Thomadakis, *Peasant Society*, 173.

⁷³ *Patmos*, 2: no. 50.

⁷⁴ P. Gautier, "Le Typikon du sébaste Grégoire Pakourianos," *REB* 42 (1984): 125; the 47 pair of oxen mentioned here were intended for "those who reside on all the estates of the monastery." In 1106, six plow teams that had been presented to the Eleousa monastery (*zeugaria doulika*) were used by twelve *ateleis paroikoi*: *Iviron*, 3: no. 56.

⁷⁵ According to *Iviron*, 3: no. 70, an average of 0.8 cows, 0.3 donkeys, 0.8 pigs, 4.3 goats or sheep and 0.5 hives per peasant (for 164 holdings); on the estates of Lavra in the theme of Thessalonike, the average was 8.2 head of livestock per holding; cf. Laiou-Thomadakis, *Peasant Society*, 30–31, 174.

⁷⁶ *Lavra*, 2: no. 91; Laiou-Thomadakis, *Peasant Society*, 174.

⁷⁷ On the *Farmer's Law*, ed. I. Medvedev, *Vizantiiskii zemledelcheskii zakon* (Leningrad, 1984), see in the last instance *ODB*, s.v. "Farmer's Law"; Haldon, *Seventh Century*, 132ff.

⁷⁸ *Farmer's Law*, §§ 23–29.

⁷⁹ *Vie de Philarete*, 127; Kaplan, *Les hommes et la terre*, 333.

⁸⁰ *Lavra*, 2: no. 91; Laiou-Thomadakis, *Peasant Society*, 31.

⁸¹ *Actes du Prôtaton*, ed. D. Papachryssanthou, Archives de l'Athos (Paris, 1975), no. 5; on apiculture, see also *Geoponika*, 15; Harvey, *Economic Expansion*, 157–58.

Middle Ages; this process was adapted to the flowering season in different geographical areas and is still practiced in twentieth-century Chalkidike.

The size of peasant holdings was in proportion to their workforce; in grain-growing regions, it may have oscillated around 4–5 ha in the case of *boidatoi* and 8–10 ha in the case of *zeugaratoi*. However, it could be less, mainly for two reasons that were not mutually exclusive: (1) some farms specialized in livestock, viticulture, or something else and allowed only a minimum of land for growing cereals, enough to feed the hearth and pay its dues. This was the case at Radolibos at the beginning of the twelfth century, where the area specified for cereals was 44 modioi (5.5 ha) for *zeugaratoi*, 28 modioi for *boidatoi*, 19 for *aktemones*, and 8 for *onikatoi*.⁸² (2) Demographic pressure over centuries or locally at any given period could also have resulted in smaller farms, as A. Harvey noted when studying the cadaster of Thebes. This document suggests that in eleventh-century Boeotia, old tenures were being subdivided into smaller units, a division that may be interpreted as the effect of a more intensive exploitation of the soil, linked to demographic pressure.⁸³

These variations can be illustrated only by means of examples. In 941, on the Kassandra peninsula in Chalkidike, a region that was then sparsely populated, a certain peasant called Nicholas, son of Agathon, bought from the fisc 100 modioi of land that he intended to clear, in part at least, and turn into fields.⁸⁴ We will see below that the *zeugaratoi* of Baris probably rented 86 modioi of land in 1073. In 1083, in western Chalkidike, nine peasants (*proskathemenoi*) on an estate belonging to the monastery of Xenophon on Mount Athos exploited a total of 300 modioi of land, or only 33 modioi per hearth (66 for one *zeugaratos*?).⁸⁵ On the island of Leros in the eleventh to twelfth centuries, a *zeugaratos* apparently owned only 35 or 40 modioi.⁸⁶ Near Strumica in the mid-twelfth century, the tenure of a *zeugaratos* was twice as extensive: 83 modioi. In the first half of the fourteenth century in Macedonia, farms were rather smaller, averaging 23–35 modioi in size (46–70 modioi for one *zeugaratos*?).⁸⁷ It was only in depopulated regions like the island of Lemnos at the beginning of the fifteenth century that one finds very large farms, of 100 or as much as 600 modioi, which were, however, probably not under full cultivation.⁸⁸

Given these extensive variations, there is not much point in estimating the size of “Byzantine peasant” farms. Furthermore, the estimated size of the theoretical average

⁸² *Iviron*, 2:290–93.

⁸³ N. Svoronos, “Recherches sur le cadastre byzantin et la fiscalité aux XIe et XIIe siècles: Le cadastre de Thèbes,” *BCH* 83 (1959): 1–166, repr. in *Etudes*, art. 3; Harvey, *Economic Expansion*, 63.

⁸⁴ *Lavra*, 1: no. 3.

⁸⁵ *Xénophon*, no. 1.

⁸⁶ Malamut, *Les îles*, 2:429.

⁸⁷ Lefort, “Radolibos,” 219–21. In the village of Kastri, in Bisaltia in 1300, those *zeugaratoi* who owned their land held 75.5 modioi of arable land and the *boidatoi* held 45.5; cf. V. Mošin, *Akti iz svetogorskih arhiva* (Belgrade, 1939), 205–10; for the 14th century, see Laiou, “Agrarian Economy,” 334ff.

⁸⁸ *Actes du Pantocrator*, ed. V. Kravari, Archives de l’Athos (Paris, 1991), 193; Laiou, “Agrarian Economy,” 359–60.

holding (in my opinion, that of a *boidatos*, which has been singled out in order to set up a model) has considerably decreased in the historiographical literature between the 1950s and 1980s (dwindling from 100 to 50 modioi),⁸⁹ although not all the consequences of this reduction have been drawn.

While peasant holdings in the seventh century were certainly very different from those of the twelfth, it must be admitted that almost nothing is known about the former. The smallholding represented the smallest possible economic unit, and it was strong because of its familial character; perhaps this enabled it to adapt to constantly changing conditions, which, irrespective of what has been said, in fact often improved. The important point here is that in some regions in the eleventh and twelfth centuries, peasant holdings were sometimes tiny, indicating that agricultural practices were more diverse or productive than previously supposed.

Forms of Exploitation

Produce: Crops and Livestock Given the diversity of the environment and the frequent absence of precise information, only a few comments are possible, based simply on written sources that are frequently no more than allusive and on a small number of studies.

Trees Fruit trees were economically important as a source of both food and wood and also because the fruit trade was lucrative near towns.⁹⁰ There was considerable diversity of fruit trees in regions that enjoyed a favorable climate. In Macedonia at the beginning of the fourteenth century, ten species are mentioned on the tenures: almond, cherry, quince, fig, pomegranate, walnut, peach, pear, apple, and plum trees. The range was narrower or slightly different in drier or warmer environments; there were few trees on the Anatolian plateau.⁹¹ The large islands of the Aegean, Crete and Cyprus, were famous for their orchards.⁹²

There is evidence that olive trees were grown, for instance in Syria and Palestine during the seventh century,⁹³ but to no great extent in Chalkidike toward the end of our period, at least when compared with the situation now.⁹⁴ Olive trees were always located close to the sea to avoid freezing in winter. In the twelfth century, the cultivation of the olive tree developed in Apulia, the Capitanata, and Campania.⁹⁵ Data relating to the consumption of or trade in oil from the tenth century on show that the olive tree was widely cultivated in the Peloponnese, in the islands of the Aegean sea, along the shores of Asia Minor, and in Bithynia.⁹⁶

⁸⁹ J. Lefort, "Rural Economy and Social Relations in the Countryside," *DOP* 47 (1993): 108.

⁹⁰ Kaplan, *Les hommes et la terre*, 36.

⁹¹ Cf. Hendy, *Studies*, 43.

⁹² Malamut, *Les îles*, 2:387–88.

⁹³ Tate, "Les campagnes," 71; Kaplan, *Les hommes et la terre*, 34–35.

⁹⁴ Laiou-Thomadakis, *Peasant Society*, 26.

⁹⁵ J. Lefort and J.-M. Martin, "L'organisation de l'espace rural: Macédoine et Italie du Sud (Xe–XIIIe siècle)," in *Hommes et richesses* (as above, note 1), 2:18–19.

⁹⁶ Hendy, *Studies*, 49, 52, 53, 57, 539; Harvey, *Economic Expansion*, 145–47; *ODB*, s.v. "Olive."

Chestnut trees were cultivated from the ninth century in southern Italy along the Tyrrhenian coast; grafts are recorded in the eleventh century. In Macedonia the peasants used to gather chestnuts in the forest in the tenth century, and they were growing chestnut trees by the beginning of the fourteenth century.⁹⁷

White mulberry trees were planted for their leaves, on which silkworms feed, over much of the empire's territory, but not everywhere, since Olivier de Serres tells us that "only there where the vine grows can silk come too."⁹⁸ The development of this profitable activity (which was labor intensive and undoubtedly required an infrastructure) has been postulated in Asia Minor, in the islands of the Aegean, and in the southern Balkans from the seventh century;⁹⁹ it is likely in the Peloponnese from the ninth century,¹⁰⁰ is attested in Calabria in the eleventh,¹⁰¹ and is a certainty in Boeotia in the eleventh and twelfth centuries and in Thessaly in the twelfth.¹⁰² In Macedonia in the fourteenth century, a few mulberry trees were grown on some tenures, though it is not certain whether these were the white trees or the black ones, which had been introduced to Greece in antiquity and were grown for their fruit. In the same region, however, we find references to rights over silkworm cocoons in some Ottoman tax registers which suggest that these mulberry trees were also connected to sericulture.¹⁰³

Grapevines were omnipresent except on the Anatolian plateau on account of its altitude and harsh continental climate. This crop was probably the most profitable in cash terms,¹⁰⁴ but the commercialization of grapes and wines must have experienced highs and lows, as may be presumed from the fact that all the names of the vintages of antiquity disappeared in the Middle Ages, even the very concept of vintage, and the names of table grapes in the twelfth century do not appear to be very old.¹⁰⁵ In the tenth century, some wines were once again identified according to their place of origin;¹⁰⁶ and in the twelfth century, Ptochoprodromos cites, among all the wines consumed in Constantinople, those of Varna in Bulgaria, Ganos in Thrace, Lesbos, Chios, Samos, and Crete.¹⁰⁷ Michael Choniates mentions, among others, the wines of Euboea, Chios, and Rhodes,¹⁰⁸

⁹⁷ Lefort and Martin, "Organisation," 19 and n. 27.

⁹⁸ Olivier de Serres, quoted by P. Lieutaghi, *Le livre des arbres, arbustes et arbrisseaux* (n.p., 1969), 870; D. Jacoby, "Silk in Western Byzantium before the Fourth Crusade," *BZ* 84/85 (1991–92): 453.

⁹⁹ N. Oikonomides, "Silk Trade and Production in Byzantium from the Sixth to the Ninth Century: The Seals of Kommerkiarioi," *DOP* 40 (1986): 33–53.

¹⁰⁰ Kaplan, *Les hommes et la terre*, 43; Jacoby, "Silk," 454. *Das Eparchenbuch Leons des Weisen*, ed. J. Koder (Vienna, 1991), 6, 5, provides no precise information about the provenance of silk sold at Constantinople (*exôthen*).

¹⁰¹ A. Guillou, *Le brébion de la métropole byzantine de Région (vers 1050)* (Vatican City, 1974); idem, "La soie du catépanat d'Italie," *TM* 6 (1976): 69–84.

¹⁰² Jacoby, "Silk," 470–72.

¹⁰³ Lefort, *Chalcidique occidentale*, index, s.v. "soie"; Jacoby, "Silk," 471 and n. 103.

¹⁰⁴ Hendy, *Studies*, 139–41; Teall, "Grain Supply," 131; Harvey, *Economic Expansion*, 148.

¹⁰⁵ Koukoules, *Βίος*, 5:288.

¹⁰⁶ *De cerimoniis aulae byzantine*, ed. J. J. Reiske, 2 vols. (Bonn, 1829–30), 1:491 (wine of Nicaea).

¹⁰⁷ *Poèmes prodromiques en grec vulgaire*, ed. D.-C. Hesseling and H. Pernot (Amsterdam, 1910), poem 3, pp. 48–71 = *Ptochoprodromus*, ed. H. Eideneier (Cologne, 1991), IV, 139–75.

¹⁰⁸ Sp. Lambros, *Μιχαὴλ Ἀκομινάτου τοῦ Χωνιάτου τὰ σωζόμενα* (Athens, 1880), 2:83.

and further examples could be cited.¹⁰⁹ Vines were cultivated especially in some sectors of Bulgaria, in Bithynia, in the islands of the Aegean, and along the Anatolian coast.¹¹⁰

Cereals Wheat and barley were always cultivated, but some secondary cereal crops seem to have been introduced during our period, showing that Byzantine agriculture was not as static as previously asserted. Ottoman tax registers from the mid-fifteenth century record how, in several villages in the Strymon valley and in Chalkidike, wheat constituted half the cereal production, barley about a third, with oats, millet, and rye—not much of the latter—making up the rest. Cereals were cultivated in similar proportions during the thirteenth century on a farm in Chalkidike belonging to the monk Theodore Skaranos, although oats were absent, and in the eleventh century in Baris, where the only two sowings envisaged were wheat and barley (apart from yellow lentils and flax).¹¹¹ The type and relative importance of cultivated cereals was subject to local or regional variations.

Thus in the tenth century there was no wheat in Phrygian Synada due to its high altitude (1,150 m), though wheat is grown in this region nowadays, most likely using the hardier strains developed recently.¹¹² The various kinds of wheat mentioned in the texts have not been identified; one rather archaic type of rice-wheat, a bearded wheat called *olyra*, is mentioned in the *Geoponika*, and apparently persisted in Lycia until the twelfth century.¹¹³ With regard to the rural economy, references to spring wheat are more significant, because this was often sown when the winter wheat yielded little or nothing, and it could intervene in the crop rotation. These crops were known in Greece during antiquity and are mentioned by Roman agronomists; they were sown in February or March, climate permitting. One such crop, called *melanather* in the *Geoponika*, is identifiable as the “black” wheat of Psellos and as the *mauraganin* referred to in Skaranos’ testament; the name has apparently been preserved in Greece.¹¹⁴ Further evidence for the existence of spring wheat at the beginning of the twelfth century is also found in the Georgian *Synodikon* in the monastery of Iveron.¹¹⁵ What we know, especially from references to the grain trade and transport, about mainly wheat- or grain-producing regions shows that they often lay close to the sea: Thessaly, Macedonia, Thrace, and the coast of Asia Minor, although climatic conditions in these places varied greatly.¹¹⁶ J.-C. Cheynet has studied the geographical distribution of imperial granaries in the tenth to eleventh centuries on the basis of seals of *horreiarior*, which reveal the

¹⁰⁹ Koukoules, *Bíos*, 5:124–25; Malamut, *Les îles*, 2:389–90.

¹¹⁰ Hendy, *Studies*, 35, 49, 51–53, 57, 559.

¹¹¹ *Patmos*, 2: no. 50. The *Xèropotamou*, no. 9 (will of Skaranos), mentions a mixed sowing of wheat and barley (*migadin*), that was not known in antiquity but existed in Greece at the beginning of the 20th century; cf. Jardé, *Céréales*, 9; for the 15th century, see data in Lefort, *Chalcidique occidentale*.

¹¹² Hendy, *Studies*, 139–40.

¹¹³ *Geoponika*, 3.8; Koukoules, *Bíos*, 5:259.

¹¹⁴ Jardé, *Céréales*, 10–11; *Geoponika*, 3.3.11; Psellos: K. Sathas, *Μεσαιωνική βιβλιοθήκη*, 7 vols. (Venice, 1872–1894; repr. Athens, 1972), 5:266 (where various names of wheat can be found); *Xèropotamou*, no. 9; Koukoules, *Bíos*, 5:258.

¹¹⁵ *Iviron*, 2:4.

¹¹⁶ Teall, “Grain Supply,” 117–28; Hendy, *Studies*, 46, 49–50.

origins of wheat produced on the state's demesnes and destined for consumption in Constantinople. These granaries were located on the northern coast of Asia Minor (Aminsos, Amastris), in particular Bithynia (Kios, Panormos, Nikomedeia, and Pegai), Thrace (Herakleia) and Bulgaria (Philippopolis), Smyrna, and Cyprus (Paphos).¹¹⁷

Barley, which could be made into bread like most grain, grew everywhere because it is more hardy; a spring barley called *leptitis* is apparently mentioned only in the *Geoponika*.¹¹⁸

Millet (*kenchros*), also edible but apparently not much valued at the time, is a spring cereal. It is mentioned in the eleventh century in lists of exemptions and in the twelfth by Anna Komnene in connection with the region of Dyrrachion, and in Bulgaria.¹¹⁹

Finally, it should be noted that the cultivation of two other cereals, oats and rye, spread during the Middle Ages. Rye (*briza*) was unknown to ancient Greece and does not feature in the *Geoponika*, but it had been grown in the West since the early Middle Ages; by the thirteenth century it was also being cultivated in Chalkidike. It was used for making bread.¹²⁰

Oats (*brome*) had been no more than weeds in ancient Greece but are noted as fodder for sheep in the *Geoponika* and were grown for grain in the eleventh century, according to the list of exemptions. Oats have turned up in southern Italy on archaeological sites of a later period. They were certainly intended for animal consumption and may have played a part in feeding the army's horses.¹²¹

Cultivated legumes, which corresponded to dry vegetables (*ospria*), are often mentioned without further detail in the texts and seem on the whole to have been the same as those in the *Geoponika*: lentils (*phake*), ers (*robin*), peas (*pissos*), broad beans (*kyamos*), calavances (*phasoulos*), chick peas (*erebinthos*), and vetches (*bikion*);¹²² yellow lentils (*phaba*) are mentioned in the proto-Byzantine period and were grown on the western side of Asia Minor in the eleventh century.¹²³ Lupine (*thermos*, then *loupinos*) occurred as a human comestible during the proto-Byzantine period and is still mentioned in the

¹¹⁷ J.-C. Cheynet, "Un aspect du ravitaillement du Constantinople aux Xe–XIe s.," *Studies in Byzantine Sigillography* 6 (1999): 1–26.

¹¹⁸ Koukoules, *Bíos*, 5:21–22; Teall, "Grain Supply," 99–100; *Geoponika*, 3.3.12.

¹¹⁹ Teall, "Grain Supply," 99; for lists of exemptions, cf. for instance *Lavra*, 1: no. 48; Anna Komnene, *Alexiade*, ed. B. Leib, 3 vols. (Paris, 1945), 3:94; J. Darrouzès, "Deux lettres de Grégoire Antiokhos écrites de Bulgarie vers 1173," *BSI* 23 (1962): 280 (millet bread).

¹²⁰ M. P. Ruas, "Les plantes exploitées en France au Moyen Age d'après les semences archéologiques," in *Plantes et cultures nouvelles: En Europe occidentale au Moyen Age et à l'époque moderne* (Auch, 1992), 9–35; *Xèropotamou*, no. 9; Koukoules, *Bíos*, 5:23.

¹²¹ Jardé, *Céréales*, 4; *Geoponika*, 18.2.6; Teall, "Grain Supply," 99; Koukoules, *Bíos*, 5:259; for France, cf. Ruas, "Les plantes," 22; for exemption lists, see for instance *Lavra*, 1: no. 48; for southern Italy, see Martin, *La Pouille*, 331 n. 10.

¹²² Lentils and ers, *Xèropotamou*, no. 9; peas, Kaplan, *Les hommes et la terre*, 30 n. 44; beans and calavances, Koukoules, *Bíos*, 5:97; chick peas, *ibid.*, 98; vetch, in Ottoman registers from the 15th century. For southern Italy: beans, chick peas, and "legumina," Martin, *La Pouille*, 331. See also Koder, *Gemüse*.

¹²³ Patlagean, *Pauvreté économique*, 39; *Patmos*, 2: no. 50 (*phaba*). *MM*, 4:202 (1192: *phabata*). Yellow lentils were grown in Bithynia during the 15th century: Ö. L. Barkan and E. Meriçli, *Hüdavendigâr Livasi Tahrir Defterleri*, vol. 1 (Ankara, 1988).

Middle Ages.¹²⁴ Legumes were cultivated in gardens, and at least some kinds were mostly grown in fields, as noted below.

Vegetables There were many kinds of vegetables, at least in the market-gardening suburbs around the large towns. On the basis of book 12 of the *Geoponika*, especially chapter 1, which reveals which vegetables were planted “under the climate of Constantinople,” and using many other sources, J. Koder has listed nearly one hundred vegetables, fresh or dried, from parsley to carrots, that were grown in the Byzantine Empire; some have nowadays been abandoned.¹²⁵ The range was presumably often less varied in the countryside.

Industrial Crops Some plants were grown for industrial use, especially for textiles. Flax (*linos*, *linarion*) is mentioned in relation to its purchase at a set price in exemption lists for the eleventh century. It was produced in Macedonia, possibly Bulgaria, in Asia Minor, in Apulia, and in Calabria; oil was also extracted from it.¹²⁶ Hemp (*kannabis*) cultivation was practiced more in Campania than in Apulia, and also in Chalkidike in the fourteenth century.¹²⁷ During the period under consideration, cotton (*bambax*) was cultivated in Crete and probably also in Cyprus.¹²⁸

Livestock In addition to the animals that immediately come to mind—such as horses and donkeys, mules (which did not require shoeing),¹²⁹ bovines, including buffalo, goats, sheep, and pigs, as well as poultry¹³⁰ and bees (mentioned above)—there were also camels, mentioned, for instance, in a novel of Nikephoros II Phokas as part of the excessive wealth acquired by some monasteries, probably in Asia Minor.¹³¹ The numerical importance of each species varied according to region, with sheep certainly the most numerous.¹³²

Farming Techniques and Production The following paragraphs summarize the little that is known about farming techniques in Byzantium and about the possible yields of two

¹²⁴ *Geoponika*, 2.39; Patlagean, *Pauvreté économique*, 39; Theophanes, *Chronographia*, ed. C. de Boor, 2 vols. (Leipzig, 1883–85; repr. Hildesheim, 1963), 1:419 (hereafter Theophanes) (*loupinos*); Koukoules, *Bios*, 5:98; for a reference to lupine in Campania in 1137, see Martin, “Travail agricole,” 118.

¹²⁵ Koder, *Gemüse*; idem, “Fresh Vegetables for the Capital,” in *Constantinople and Its Hinterland*, ed. C. Mango and G. Dagron (Cambridge, 1995), 49–56.

¹²⁶ *Lavra*, 1: no. 48; Koder, *Eparchenbuch*, 9.1; 9.6; *Iviron*, 3: no. 58; E. Patlagean, “Byzance et les marchés du grand commerce,” in *Mercati e mercanti nell’alto medioevo: L’area euroasiatica e L’area mediterranea* (Spoleto, 1993), 599; Martin, *La Pouille*, 332; J.-M. Martin and G. Noyé, “Les campagnes de l’Italie méridionale byzantine (Xe–XIe siècles),” *MélRome Moyen Age* 101 (1989): 580; *ODB*, s.v. “Linen.”

¹²⁷ *Geoponika*, 2.40.2; Lefort and Martin, “Organisation,” 20 n. 31; Lefort, *Chalcidique occidentale*, index, s.vv. “lin” “chanvre,” “coton.”

¹²⁸ Malamut, *Les îles*, 2:390; MM 6:96 (in Crete, 1118).

¹²⁹ Teall, “Agricultural Tradition,” 52.

¹³⁰ Chickens were included in the *kaniskia* that landowners owed to officials; *ODB*, s.v. “Fowl, domestic.”

¹³¹ Svoronos, *Novelles*, 157.

¹³² I referred above to the composition of the livestock that peasants owned at the beginning of the 14th century; the composition of some domanial flocks in the 11th century will be discussed below.

important lines of production, wine and cereals. Note, too, that the production of olive oil varied according to the age of the olive trees—according to my hypothesis, approximately 2 or 3 liters per tree.¹³³ Olivier de Serres provides data on the production and income from mulberry trees in southern France in the sixteenth century: twenty to twenty-five trees yielded 10 *quintaux* of leaves, which yielded 5 to 6 *livres* of silk, worth 10 or 12 *écus*.¹³⁴

Cultivation took up limited areas mainly located on fluvial terraces, in the hilly zones between the slopes and the plains, which were, at the time, poorly drained, at least in areas where this geographical profile predominated. This agricultural space proved adequate for a long time; when more land was needed, it was enlarged, although this involved considerable clearance work. Once this had been done, the empire never needed to import foodstuffs. On the contrary, it exported them in the twelfth century.¹³⁵

Gardens Although gardens are not always mentioned, even in the most precise descriptions of peasant properties, presumably most farms included one, since vegetables formed an indispensable part of a family's nourishment. The size of gardens that have been listed (an average of 0.2–0.4 modios in several villages in Macedonia according to *praktika* from the beginning of the 14th century) was adequate, going by an average central European person's consumption in the nineteenth century, which corresponded to 40 m² (0.04 modios) of horticultural produce, including potatoes.¹³⁶ The garden often lay close to the house for obvious reasons, being the plot that required the most work and manure, and, since houses were generally placed near sources of water, it could also be watered. When a garden was located at a considerable distance from the dwelling, as was sometimes the case, this was to benefit from irrigation, particularly, as noted above, along the diversion canals that brought water from the streams to the mills; precise agreements about sharing water were drawn up when the owner of the garden was not the owner of the mill.¹³⁷

Large towns were surrounded by market-gardening suburbs, as was the case with Constantinople and, according to John Kaminiates, with Thessalonike from the tenth century on. These parcels of land often belonged to the powerful, in which case they

¹³³ For the cultivation of olive and fruit trees, see *Geoponika*, 9 and 10; for vines and olives, see A. I. Pini, "Vite e olive nell'alto medioevo," in *L'ambiente vegetale nell'alto medioevo* (Spoleto, 1990), 329–70; *La production de vin et d'huile en Méditerranée* (= *BCH*, suppl. 26) (Athens-Paris, 1993); on oil presses, M. C. Amouretti et al., "A propos du pressoir à huile," *Mél Rome Antiquité* 96 (1984): 379–421; *ODB*, s.v. "Olive Press." Around 1970, in the Languedoc, production levels varied between 5 and 8 kg per tree between the fifth and fourteenth years, and between 10 and 30 kg after the fifteenth year, depending on variety and whether the crop was dry or irrigated; cf. R. Loussert and G. Brousse, *L'olivier* (Paris, 1978), 444; in the same region today, between 5 and 6 kg of olives are required to make a liter of oil. On the cultivation of olive trees in the 13th through 15th centuries, see Laiou, "Agrarian Economy," 353.

¹³⁴ Lieutaghi, *Livre des arbres*, 870. On sericulture, cf. Guillou, "La soie," 76–78.

¹³⁵ A. Kazhdan, "Two Notes on Byzantine Demography of the Eleventh and Twelfth Centuries," *ByzF* 8 (1982): 120.

¹³⁶ Koder, *Gemüse*, 69.

¹³⁷ *Iviron*, 1: nos. 9 (10th century) and 30 (11th century); Lefort, *Chalcidique occidentale*, 136–37 (14th century).

would have been cultivated by tenant gardeners. West of Thessalonike, the monastery of Iveron held some “fields” near the Golden Gate, one of which was already being exploited as a garden by the beginning of the twelfth century; it covered an area measuring six modioi, was called *ta Keporeia*, and included two wells and two cisterns. To the west and southeast of the town, the presence of tightly packed parcels of land suggests intensive use of the soil linked to the proximity of the urban market.¹³⁸ The produce of the Iveron gardens near the Golden Gate is known in the fifteenth century: cabbage, leeks, carrots, garlic and onions, lettuce, cucumbers, pumpkins, and melons were all grown on separate plots.¹³⁹ Such a regimented horticultural landscape may, perhaps, not have been as clearly defined in the countryside; vines and fruit-bearing trees were often associated with growing vegetables, as was emphasized by the practice of calling certain plots *kepampelon* or *kepoeribolon*.¹⁴⁰

Meadows were certainly less rare on estate lands than on peasant holdings. As very valuable parcels of land, they were nearly always classified by the fisc as “first-quality land”; they could be fairly vast and were located in the most humid spots. Frequently irrigated and occasionally drained, they were cultivated for scything.¹⁴¹ In the *Geoponika*, vetch, alfalfa, lupine, and, as noted above, oats were grown for fodder.¹⁴² Hay was stored in barns, especially in places with no winter pasturage.¹⁴³

Vineyards In 985 the monastery of Iveron gave the Athonite community a large vineyard of 30 *plinthia* (90 modioi) situated near Hierissos in eastern Chalkidike, which seems to have been quite exceptional.¹⁴⁴ Generally speaking, vineyards tended to be small, on the order of one modios or a bit larger. They were most commonly held by small farmers. Of those vineyards properly belonging to a domain, some were exploited directly, though many more were rented out to peasants who did not necessarily live on the estate.¹⁴⁵ In Macedonia, at the beginning of the fourteenth century, peasants in several villages owned on average 5 modioi of vineyards. By the end of the Byzantine period, viticulture represented perhaps 16% of the area under cultivation in some regions, which comes quite close to the 21% level achieved in Greece in 1860 and never exceeded since then.¹⁴⁶ The area of land dedicated to vines may have been less previously, but these data show how important a role viticul-

¹³⁸ Kaplan, *Les hommes et la terre*, 63–65; John Kaminates, *De expugnatione Thessalonicae*, ed. G. Böhlig (Berlin, 1973), 5–6; J.-M. Spieser, *Thessalonique et ses monuments du IV^e au VI^e siècle* (Athens–Paris, 1984), 16; *Iviron*, 2: no. 52; Lefort and Martin, “Organisation,” 21 and n. 34.

¹³⁹ *Iviron*, 4: no. 97; cf. Laiou, “Agrarian Economy,” 352ff.

¹⁴⁰ On *Latium*, see Toubert, *Structures*, 1:210–14; see also *Jardins et vergers en Europe occidentale, VIII^e–XVIII^e siècles* (Auch, 1987).

¹⁴¹ *Géométries*, § 53, 54, 66, 150, 151, 202; *Lavra*, 1: no. 56.

¹⁴² *Geoponika*, 2.39.4 (lupine), 3.1.14 (alfalfa), 3.6.7 (vetch); for meadows, see also Kaplan, *Les hommes et la terre*, 75–76.

¹⁴³ *Iviron*, 2: no. 52 (*chortobolon*).

¹⁴⁴ *Iviron*, 1: no. 7.

¹⁴⁵ There is an allusion to dues on rented vines (*ampelopakton*) in some 12th-century documents: in 1152 near Strumica, *Iviron*, 3: no. 56; in 1163 in Thessaly, C. Astruc, “Un document inédit de 1163 sur l'évêché thessalien de Stagi,” *BCH* 83 (1959): 215.

¹⁴⁶ On the 19th century, S. Kourakou-Dragona, “Ἡ ἐξέλιξη τοῦ ἐλληνικοῦ ἀμπελώνα,” in *Ἱστορία τοῦ ἐλληνικοῦ κρασιοῦ* (Athens, 1992), 118.

ture played in the peasant economy and point to a very commercialized wine production.

What may be gleaned about viticultural techniques points, on the whole, to continuity with the practices of the previous period. In the tenth century, a letter addressed to the *xenodochos* of Pylai evokes the grape harvest and wine making in a manner that may owe much to the *Geoponika*, or alternatively, may point to the permanence of viticultural practices.¹⁴⁷ Such permanence may well be the case with regard to the practice of digging out the whole plot prior to planting the vines, which is alluded to in the proto-Byzantine period. However, it was apparently less common than the simple and cheaper practice of digging ditches in which to plant vinestock.¹⁴⁸ Although the digging-out practice is well attested during the Middle Ages under the term *kylisma*, it does not follow that this was always practiced.¹⁴⁹ In any case, irrespective of the processes employed to produce the vine plants, the occasion for long passages in the *Geoponika*, it is clear that the best ones were selected with the aim of improving the quality and quantity of the produce.¹⁵⁰ As in the proto-Byzantine period, vines were manured.¹⁵¹ The tasks that generally had to be carried out on the plot after planting, especially pruning, hoeing, harrowing, staking, and tying,¹⁵² had surely not changed. Three methods of training vines are mentioned in the *Geoponika*: rampant vines, low vines trained up stakes, and vines trained up trees. Evidence for all three is found in the period under consideration.¹⁵³

Training vines along stakes was probably the most common method on plots where vines were the sole crop; according to an instruction from the fisc, the stocks were planted at intervals of 0.7 m, in regular rows, which could constitute units of measurement and made it easier to count vine stems.¹⁵⁴ Since vines exhaust the soil and benefit from replanting, viticulture involved distinguishing between functional microplots, evidence for which is found in both the *Geoponika* and medieval documents: the new vines (*phyteia*, *neophyton*),¹⁵⁵ the replanted vines, and old vines (*palaiaampela*) that would one day be renewed.¹⁵⁶ Nurseries, which were probably linked to the ancient domanial economy, are the only feature for which there is not much evidence.¹⁵⁷ The diversity

¹⁴⁷ Theodore Daphnopates, *Correspondance*, ed. Darrouzès and L. G. Westerink (Paris, 1978), 209.

¹⁴⁸ *Geoponika*, 5.19.1.

¹⁴⁹ *Géométries*, §49 and 180 (in the theme of Thrace), 73 (Thrace and Macedonia), 191 and 193 (Bithynia); *Iviron*, 3: no. 67; MM 2:507 (1401). The term *ampelotopion* probably also designates a plot of land that has been dug over for planting vines.

¹⁵⁰ For instance *Geoponika*, 5.8.1.

¹⁵¹ *Ibid.*, 3.15.4; 5.16.8–9; *Géométries*, § 28.

¹⁵² *Géométries*, § 49.

¹⁵³ *Geoponika* 4.1.11; 5.2.14; 5.2.15. Rampant vine (*chamampelon*), S. Cusa, *I diplomati greci ed arabi di Sicilia pubblicati nel testo originale, tradotti ed illustrati* (Palermo, 1868–82), 2:636; Darrouzès, “Deux lettres,” 279; climbing vine (*anadendras*), see for instance *Patmos*, 2: no. 52.

¹⁵⁴ *Géométries*, § 280; *Xèropotamou*, no. 16 (*traphoi*).

¹⁵⁵ Koukoules, Βίος, 5:281.

¹⁵⁶ Cf. some of the microtoponyms at Radolibos from the beginning of the 12th century (*Iviron*, 2: no. 53): Chersampela, Palaiaampela, Phyteia, Epáno Phyteia, δεσποτική φυτεία.

¹⁵⁷ Psellos, (J. F. Boissonade, *Anecdota graeca* [Paris, 1829; repr. 1962], 1:245, does indeed mention the tree nursery (*phyltorion*) that features in the *Geoponika*.

of microplots, as implied by wine-growing techniques, explains in part why plots that were solely used for growing vines, and were normally enclosed, did not always form continuous land units and were not always clearly separated from the fields; at least, there was no such clear separation at Radolibos at the beginning of the twelfth century.¹⁵⁸ Winepresses were often set up close to vineyards. I. Papangelos may have found remains of such presses in Chalkidike.¹⁵⁹

In sufficiently humid regions, vines were frequently grown alongside trees on plots of land close to the dwellings; in some cases, the vines were simply grown beside the trees; in others it was a case of vines trained up trees as in the *Geoponika*, but the landscape they formed had changed completely since then. On the vast ideal estates of the proto-Byzantine period, where vineyards flourished over the plains, vines simply grew up poplar trees set 7 m apart in regular rows; fruit trees or crops could be grown in the gaps.¹⁶⁰ In the medieval period, on the other hand, vines were supported by fruit trees, which were called *dendra hypoklema* for this reason, in little vine orchards (*ampeloperibolia*), suggesting intensive exploitation of the soil within a smallholding context,¹⁶¹ as in the case of the other types of plots, mentioned above, which combined a variety of crops.

Nothing is known about the yield, though a recent hypothesis suggests that it could amount to 25 hectoliters of wine per hectare in Chalkidike,¹⁶² or ca. 25 measures (*metra*) per modios,¹⁶³ which is not inconceivable, although the only information available for the same region suggests a volume of yield that was twice as low.¹⁶⁴ In any case, a grower who cultivated more than 2 modioi of vines would have produced more wine than required for consumption by his household.

Trees and specialized crops These included olive groves, which, like orchards¹⁶⁵ (mentioned above in connection with smallholdings), were farmed directly on estates. Some, on the southern side of Mount Athos, comprised hundreds of olive trees.¹⁶⁶ There were

¹⁵⁸ In 7th-century Galatia, the *Vie de Théodore de Sykéôn*, ed. A.-J. Festugière (Brussels, 1970), chap. 115, does, however, allude to the village vineyard. Other examples could be cited.

¹⁵⁹ I. Papangelos, “Ἀμπελος καὶ οἶνος στὴν μεσαιωνικὴ Χαλκιδική,” in *Ἱστορία τοῦ ἐλληνικοῦ κρασιοῦ* (as above, note 146), 231–37. It is not always possible to distinguish between wine presses and olive presses.

¹⁶⁰ *Geoponika*, 4.1.

¹⁶¹ *Patmos*, 2: no. 50. On viticulture, cf. Kaplan, *Les hommes et la terre*, 71–72; Martin, *La Pouille*, 340–43.

¹⁶² Papangelos, “Ἀμπελος,” 224.

¹⁶³ Concerning the content of the *metron*, see Schilbach, *Byzantinische Metrologie*, 112–13.

¹⁶⁴ *Iviron*, 2: no. 42: at Athos, in 1080, a vineyard worth 100 nomismata (possibly 15 modioi in size) produced 124 measures of wine. In Castile during the 18th century, yield varied greatly according to place and year, and may have been in the order of 13 hl/ha; however, Castilian yields are low; cf. A. Huetz de Lemps, “Vignobles et vins de Castille du XVIe au XVIIIe siècles,” in *Le vigneron, la viticulture et la vinification en Europe occidentale, au Moyen Âge et à l’époque moderne* (Auch, 1991), 168–69. In France during the modern age, average yields seem to be in the order of 20 hl/ha: M. Lachiver, “La viticulture française à l’époque moderne,” *ibid.*, 215.

¹⁶⁵ Cf. for instance *Iviron*, 1: no. 9.

¹⁶⁶ *Xénophon*, no. 1 (1089; 300 olive trees); *Iviron*, 2: no. 52; *Patmos*, 2: no. 50; Harvey, *Economic Expansion*, 145.

also banks of reed beds, reeds being used to plait ropes and weave baskets,¹⁶⁷ as well as most of the industrial crops mentioned above, including mulberry trees.

Fields These were generally squat, rectangular parcels,¹⁶⁸ often set in open landscapes, but varying greatly in size. In one specific case, the partially preserved cadaster of Radolibos, dating from the beginning of the twelfth century, includes a description of 979 fields, which measured on average 2.2 modioi.¹⁶⁹ In Chalkidike, forty-six fields were sold at the beginning of the fourteenth century that measured on average 5.4 modioi.¹⁷⁰ In other places, fields could be much larger; in Capitanata, a recently colonized region, the fields could sometimes assume very complex shapes and often measured more than a hectare (ca. 10 modioi);¹⁷¹ in Melanoudion in Caria at the end of the eleventh century, in a region dedicated to growing cereals, fifteen parcels measured on average 47 modioi.¹⁷² These figures point to the existence in some areas of tightly knit plots, all the more so when soil occupancy was long established, resulting in fields being divided up among heirs. In places where the plots were much more loosely knit, the explanation may lie in geographical or historical conditions that now elude us. Some fields lay within the village (*esochorapha*), but most of them were some distance away. Because peasants tended to cultivate the loamier fields closest to their dwellings before tackling more demanding soils, there was a tendency for cereal-growing areas to develop. Threshing floors were sometimes out in the countryside, close to the fields, and often appear to have belonged to one particular farmer.¹⁷³

After harvest and before they were plowed again, fields were often turned over to pasture, which served to manure them.¹⁷⁴ Perhaps this method of fertilization was sufficient; Pliny thought that wheat needed less fertilizer than barley, and could even do without.¹⁷⁵ Theophrastus and Pliny refer to beans and the *Geoponika* to lupine as sources of green fertilizer;¹⁷⁶ to my knowledge, no text confirms the use of green fertilizer in this way during the Middle Ages, although this is not inconceivable. In any case, yields did increase, though of course slowly, as a result of selective sowing, an ancient practice that is mentioned by the Roman agronomists and in the *Geoponika*, whose advice was adopted by Psellos when writing on the subject. There is no reason why Byzantine peasants should not also have selected their sowing seed, though this process

¹⁶⁷ *Geoponika*, 3.2.2; *Cekaumeni Strategicon*, ed. B. Wassilievsky and V. Jernstedt (St. Petersburg, 1896; repr. 1965), 36 (hereafter Kekaumenos, *Strategikon*); *Iviron*, 2: no. 52.

¹⁶⁸ For central Italy, see Toubert, *Structures*, 1:283–84, 294–96; for Macedonia, Lefort, “Radolibos,” 212–13.

¹⁶⁹ *Iviron*, 2: no. 53.

¹⁷⁰ *Xeropotamou*, no. 16.

¹⁷¹ Lefort and Martin, “Organisation,” 21.

¹⁷² *Patmos*, 2: no. 50.

¹⁷³ *Iviron*, 2: no. 53; Kaplan, *Les hommes et la terre*, 59–60. For harvests, see the literary text mentioned above, Daphnopates, *Correspondance*, 209.

¹⁷⁴ *Farmer's Law*, sec. 27; *Iviron*, 1: no. 9.

¹⁷⁵ Pliny the Elder, *Naturalis historia*, 18, p. 53: “land that has not been manured will be sown with wheat rather than with barley” (after Theophrastus); Teall, “Grain Supply,” 129.

¹⁷⁶ Theophrastus, *Historia plantarum*, 8.9.1; Pliny, *Naturalis historia*, 18, p. 30; *Geoponika*, 2.39.6.

occurs automatically to some extent.¹⁷⁷ Furthermore, yields could hold their own and even increase when the fallow land was planted with legumes, some of which served to increase its fertility, as the authors of antiquity had previously pointed out.¹⁷⁸

Not much data is available on cereal-growing methods in Byzantium. Practices must have varied according to region and period. References to extreme cases in some literary texts lead one to deduce that growing cereals was a precarious and unproductive process or, alternatively, a miraculous one. Little can be drawn from information of this kind. Documentary evidence points to the likelihood that land commonly lay fallow every second year, at the end of the period under consideration, north of the Aegean, in Macedonia at least. This was certainly the case in Chalkidike in the thirteenth century, since Theodore Skaranos sowed 103 modioi of seed¹⁷⁹ over his 270 modioi of land, part of which, therefore, was not directly farmed. Consequently, by late November, he was probably planning on sowing spring wheat in fallow land as a catch crop, and following the same process with the millet and ers that he harvested.¹⁸⁰ A two-year rotation also seems to have been followed at Radolibos at the beginning of the twelfth century, albeit for negative reasons, since the tiny size of the farms would not have allowed land to be left fallow for more than one year and even suggests that part of the fallow land was farmed. Crop rotation, involving wheat and legumes or wheat and spring barley, with the second sowing on fallow land, is very ancient and is mentioned in the *Geoponika*.¹⁸¹ This is not to say that catch crops were current practice nor continuously engaged in through the centuries, but that they remained a possibility within the crop system when the population increased, one that was certainly used before the thirteenth century. Pliny had recourse to Virgil when he clearly stated the relationship between lack of space and the practice of catch crops: "Virgil advises allowing the fields to rest every second year—if the size of the farm permits it, this is certainly very useful; if it is not possible, one must sow wheat in a field where lupine or vetch or beans or any other plant that enriches the soil has been harvested."¹⁸²

Both archaeology and the textual sources allow one to deduce the importance of legumes and their role in the crop system; they were cultivated in Syria during the proto-Byzantine period; vetches appear to have formed part of the field crops in the seventh-century Negev.¹⁸³ The purchase of dried vegetables at a fixed price is mentioned in the eleventh-century lists of exemptions, which suggests that these were not simply garden produce limited to consumption by the family, as has been asserted, but

¹⁷⁷ *Geoponika*, 2.16.1–3; Psellos, Boissonade, *Anecdota graeca*, 1:242; J. R. Harland, *Les plantes cultivées et l'homme* (Paris, 1987), 172.

¹⁷⁸ Pliny, *Naturalis historia*, 18, p. 50; *Geoponika*, 2.12.2; Toubert, *Structures*, 1:250.

¹⁷⁹ Allowing for 1 modios of wheat (12.8 kg) being sown over 1 modios of land (about 1,000 m²): *Géométries*, p. 216. This was close-set sowing; see p. 254 below.

¹⁸⁰ J. Lefort, "Une exploitation de taille moyenne au XIII^e siècle en Chalcidique," in 'Αφιέρωμα στὸν Νίκο Σβορώνο (as above, note 1) 1:368, 370.

¹⁸¹ Jardé, *Céréales*, 85–86; *Geoponika*, 3.6–7 (grain/legumes), 2.12.2 (legumes/wheat), 3.3.12 (wheat/spring barley); on crop rotation in medieval Latium, Toubert, *Structures*, 1:246–50.

¹⁸² Pliny, *Naturalis historia*, 18, p. 50.

¹⁸³ Tate, "Les campagnes," 71; Patlagean, *Pauvreté économique*, 247.

that they had a place in the cereal crop cycle.¹⁸⁴ This was the case in Latium in the first half of the tenth century;¹⁸⁵ in Campania, calavances, broad beans, and chick peas have been attested since the first half of the eleventh century, whereas in Apulia, the introduction of legumes into the crop rotation apparently dates only from the beginning of the twelfth century.¹⁸⁶ In Macedonia and Bithynia, Ottoman tax registers from the fifteenth century show that legumes were an integral part of the agricultural cycle.¹⁸⁷ Though these facts apply only to specific regions and periods, the important point is that they reveal the existence of practices that had long been known.

Generally speaking, while the system of agriculture was certainly traditional, it was inherently capable of improvement, up to a point. Land clearance was an altogether different matter, and there is reason to think that the decision to bring part of a forest or marshland into cultivation was taken only when every possibility of improvement had been exhausted, when it was no longer enough simply to farm the available fields as intensively as possible.

There is no direct information about yields, which would in any case have varied greatly from year to year. In Greece, the wheat harvest in 1921 yielded on average 6.6 quintals per hectare; it varied from 4.9 in Chios to 11.5 in Arcadia, and was 9.8 in Macedonia. Barley yielded rather more, 7.1 quintals per hectare, as in the case of mixed wheat and barley crops, which yielded 8.3.¹⁸⁸ In 1938, in eastern Anatolia, a dry crop close to the Murat River yielded 6.3 quintals of wheat and only 4 of barley per ha.¹⁸⁹ These proportions were certainly not surpassed by Byzantine agriculture, nor indeed achieved unless as an exception. Current research into the Ottoman tax registers shows that in Bithynia at the beginning of the sixteenth century yields were very diverse locally, depending on soil, altitude, and exposure, and that on average they often oscillated between 4 and 6 quintals per hectare.¹⁹⁰ With regard to the thirteenth century, we may deduce from the testament of Skaranos that barley yielded 5.3 grains for one, this is, approximately 5.4 quintals per hectare.¹⁹¹ Somewhat insecure calculations concerning Radolibos at the beginning of the twelfth century suggest that the minimum yield from cereal crops was 5.1 grains for 1, that is, ca. 5.3 quintals per hectare.¹⁹² These calculations have been carried out with respect to an average holding, comprising one ox and 25 modioi of land, supposing that the holding had a balanced budget. The calculations take into account the necessary sowings, the probable consumption, and dues in cereals as known to us; at the same time, it has been assumed

¹⁸⁴ Cf. for instance *Lavra*, 1: no. 48.

¹⁸⁵ Toubert, *Structures*, 1:248.

¹⁸⁶ Martin, "Travail agricole," 118; idem, *La Pouille*, 336.

¹⁸⁷ Cf. examples in Lefort, *Chalcidique occidentale*; for Bithynia, Barkan and Meriçli, *Hüdavendigâr*.
¹⁸⁸ Jardé, *Céréales*, 203–5. On mixed crops cf. above, note 111.

¹⁸⁹ Kaplan, *Les hommes et la terre*, 82.

¹⁹⁰ According to data collated by Barkan and Meriçli, *Hüdavendigâr*.

¹⁹¹ Lefort, "Une exploitation," 369. Yield in quintals per ha = yield per grain \times 0.128 (quintal sown per modios) \times the number of modioi per ha. We have seen (cf. note 51) that one modios seems to have amounted to 1,250 m² in Macedonia.

¹⁹² Lefort, *Radolibos*, 222.

rather arbitrarily, though not implausibly, that one-eighth of the fallow land was used to grow spring cereals or legumes—a hypothesis suggested by N. Kondov (for the 14th century) in an article published in 1974, which has perhaps not received sufficient attention.¹⁹³

Kondov considers unlikely the low estimate put forward by Svoronos in his *Le Cadastre de Thèbes* (3 grains for 1) and has proposed a less pessimistic estimate for the medieval Balkans, relying primarily on agronomic arguments, especially with regard to our knowledge of the normal density of sown grain during the Byzantine period: a modios of wheat sown over one modios of land corresponds to an intensive sowing, as advised in the *Geoponika*,¹⁹⁴ of more than 300 grains to the square meter. This sowing is characteristic of intensive farming. Kondov considers it probably correct to assume an average yield of 4.2–5.2 grains for one in the case of cereal crops in fourteenth-century Macedonia, adding that this rate of production, the higher estimate at any rate, would have resulted in a marketable surplus.¹⁹⁵ Indeed, yields from cereal crops were probably less poor than has long been stated, and recently too, on the basis of certain estimates by Svoronos: 3 or 3.5 for one.¹⁹⁶

As noted earlier, Byzantine cereal crops were grown within a smallholding context. The little that is known about them—fields worked with plows, the probable existence of biannual fallow land and of catch crops, and the introduction of new plants—suggests that agricultural practice in the Middle Ages was not less elaborate than in the proto-Byzantine period. Some seventh-century papyri refer to very contrasting yields, as one might expect: 4–5 grains for one in one case but, probably in a more favorable area or during a good year, 8–9 for one in another.¹⁹⁷ Similar yields are obviously no less likely in the Middle Ages, the more so in that, until the twelfth century, very often only the best land was put to the plow. In the most fertile regions, average yields of slightly more than 5 quintals to the hectare were apparently plausible in the twelfth century. Grain was stored in dug-out silos¹⁹⁸ or in lofts.¹⁹⁹

The picture presented by scholars in the past, of an extensive cereal production spread over huge areas in a routine and unproductive manner, has played an impor-

¹⁹³ N. Kondov, “Über den wahrscheinlichen Weizenertag auf der Balkanhalbinsel im Mittelalter,” *EtBalk* 10 (1974): 97–109.

¹⁹⁴ *Geoponika*, 2.20; Kondov, “Weizenertag,” 108.

¹⁹⁵ Kondov, “Weizenertag,” 108–9.

¹⁹⁶ Harvey, *Economic Expansion*, 180; Kaplan, *Les hommes et la terre*, 82. Svoronos, “Structures économiques,” uses a yield of 1:3.5 (p. 57 and n. 32); however, several of his evaluations are rightly based on a yield of 1:5 (cf. p. 58). According to our calculations, set out below, the only probable conclusion is that an average yield of 1:3.5 for second-quality land, with no catch crops, is not credible when set alongside the high fiscal levies that we have accepted.

¹⁹⁷ Patlagean, *Pauvreté économique*, 246–48. In 6th-century Lycia, a 1:5 yield was considered very good but not necessarily miraculous; see *The Life of St. Nicholas of Sion*, ed. I. Ševčenko and N. P. Ševčenko (Brookline, Mass., 1984), 92–94; Oikonomides, “Terres du fisc,” 335.

¹⁹⁸ *Ioannis Cinnami Epitome rerum ab Ioanne et Alexio Comnenis gestarum* ed. A. Meineke (Bonn, 1836), 106 (hereafter Kinnamos); D. Z. Sophianos, *Ὅσιος Λουκάς, ὁ βίος τοῦ ὁσίου Λουκά τοῦ Στειριώτου* (Athens, 1989), 217; Kaplan, *Les hommes et la terre*, 125.

¹⁹⁹ *Iviron*, 2: no. 52.

tant role in the way the Byzantine economy has been analyzed; it has even been suggested that Byzantium's fate was determined by the low production levels that farmers achieved. According to this view, farming techniques were characterized by long fallow periods, the absence of catch crops and spring cereals, the total lack of any seed selection, the shortage of manure, and the absence of any notable form of progress.²⁰⁰ This picture ought to be revised. In any case, the farming system described above was inherently capable of becoming more productive and of adapting to stronger demand. Furthermore, that production took place within a smallholding context suggests that the "care of plants" was both customary and necessary even before the aristocracy took an interest in it.

The Exploitation of Uncultivated Zones Some regions were sparsely populated, particularly inland, where the environment was unfavorable, and in places close to frontiers mainly because of the lack of security or because the state had sometimes set up a sort of no-man's-land there for strategic reasons.²⁰¹ Uncultivated areas were often wooded (except on the Anatolian plateau); they were very extensive everywhere and constituted a potential source of wealth. Brushwood and scrubland, those intermediate forms of vegetation between forest and grassland, on plains or high ground, already covered significant areas in some regions; they, too, were valuable in economic terms.

The demand for timber, for both the navy and construction in general, and for fuel wood, charcoal, and pitch, together with stock raising and the peasants' own needs, built up links between town, cultivated countryside, and *incultum*. Forests and grassland belonged to the state, to the owners of estates, and, at the beginning of the period under consideration at least, to the villagers.

Forests A. Dunn has recently studied forests and their various degraded arboreal forms, the produce derived from them, and their use; most of the following comments are derived from this study.²⁰² Although the many trees and bushes that were used for a variety of ends, from medicine to dyeing, should not be neglected, it is clear that the oak played a predominant role, principally as timber, though some supplied edible acorns²⁰³ and others oak apples. Its economic importance is emphasized by the fact that some inventories carefully enter the number of trees in oak plantations.²⁰⁴ Attention should also be drawn to the holly oak or holm oak (*prinos*, *prinarion*), which was present everywhere in zones of degraded vegetation and was particularly prized on account of the parasite it harbors, which was used for dyeing, and to the lentisk pistachio tree (*schinos*), which occurred only in strictly Mediterranean environments and was the source of mastic, used by pastry cooks and perfumers. The resin from conifers

²⁰⁰ Cf. in the last instance Kaplan, *Les hommes et la terre*, 24, 56, 57, 61, 66, 86, 87.

²⁰¹ Hendy, *Studies*, 39.

²⁰² Dunn, "Woodland"; see also idem, "The Control of the Arboreal Resources of the Late Byzantine and Frankish Aegean Region," in *L'uomo e la foresta secc. XIII–XVIII*, ed. S. Cavaciocchi (Prato, 1996), 479–97.

²⁰³ *Iviron*, 2:187.

²⁰⁴ For instance *Patmos*, 2: no. 50.

was used to make pitch, crucial for shipbuilding, as well as for preparing amphoras and barrels.

All trees were a source of wood for fuel, and poorer specimens were presumably used to make charcoal. In those days, forests were very well developed everywhere apart from central Anatolia (on account of the climate) and in southern Greece, where the vegetation was already degraded in antiquity, especially on mountain slopes and, in some parts of the Balkans, on the plains as well.²⁰⁵ Forests were used only partially, although they seem to have been more heavily exploited toward the end of the period under consideration. Some regions, especially near the sea, were exploited more intensively, especially for timber: Crete, Cyprus, Levantine Syria and the Taurus, Macedonia, and possibly the northeastern part of Asia Minor and the Albanian coastline.²⁰⁶ Mastic was a speciality of Chios, but was also produced in Crete and Cyprus.²⁰⁷

At the beginning of our period, although village and domanial forests were in principle exploited by their owners, they were in fact subject to the demands of the state, which could requisition labor, possibly in return for payment, and require obligatory felling and transport of wood, boat-building, and supplies of pitch or charcoal. The state could also purchase forest produce at fixed prices.²⁰⁸ From the tenth or eleventh century, the exploitation of state forests and those belonging to the great landowners was in part direct, in which case it would have been effected partly by obligatory labor services exacted from the peasantry.²⁰⁹ However, rights of usage in state woods were sometimes free.²¹⁰ In other cases, their exploitation was subjected to charges, albeit indirectly, through the medium of entrepreneurs or woodcutters who were obliged to render dues, referred to as *orike* in some documents.²¹¹ That the state was well aware of the strategic nature of its interest in timber is proven by the prohibition on all export of wood in the ninth and tenth centuries and probably until the end of the twelfth.²¹² Generally speaking, the importance attributed to forests and their various products and revenues is underlined by the presence of forest guards on imperial estates;²¹³ the existence of *forestarii* in the eleventh and twelfth centuries has also been noted in Apulia.²¹⁴ Presumably a part of forest produce, such as timber, fuel, and charcoal, was traded everywhere, as were derived industrial products.²¹⁵

Hunting and Fishing The state and other estate owners who had inherited its fiscal prerogatives levied dues in kind over hunting and fishing, often a third of the bag or

²⁰⁵ Hendy, *Studies*, 38; *Iviron*, 1:159.

²⁰⁶ Dunn, "Woodland," 258–61.

²⁰⁷ Malamut, *Les îles*, 2:388–89.

²⁰⁸ *Farmer's Law*, § 39–40: the villagers cut down oak trees in the forest; Dunn, "Woodland," 266, 267, 268, 269, 272.

²⁰⁹ Dunn, "Woodland," 267.

²¹⁰ *Lavra*, 1: nos. 2 and 3; Dunn, "Woodland," 273 n. 153.

²¹¹ Dunn, "Woodland," 273; *Iviron*, 3: no. 54.

²¹² Dunn, "Woodland," 263, 264.

²¹³ *Patmos*, 2: no. 50; Dunn, "Woodland," 264, 273–74.

²¹⁴ Martin, *La Pouille*, 374–76.

²¹⁵ Dunn, "Woodland," 261, 268, 279.

the catch.²¹⁶ In Norman Italy, as in the Byzantine Empire, more is known about royal and aristocratic hunts than about peasants' hunts.²¹⁷ In addition, we are well informed about the predilection shown by bishops in the tenth century and by *hegoumenoi* in the twelfth for unusual fish, though it is clear that fish, which was inexpensive wherever the catch was abundant, could play an important role in the food supply, particularly in towns. G. Dagron has described fishing techniques and the structures (*bibaria*) that had long been associated with them, the dues, either taxes or possibly leases to do with fishing, and the means by which the produce was marketed in Constantinople.²¹⁸

The case of the capital was not special in every aspect; there was, for instance, a fish market at Serres, close to Lake Achinos, at the beginning of the fourteenth century.²¹⁹ At the end of the tenth century on the territory of the village of Siderokausia in Chalkidike, fishing rights on the river were shared between the villagers and a monastic estate, with the monastery probably benefiting from a tax exemption in this respect.²²⁰ River, lake, and sea fishing thus constituted a source of income for peasant fishermen and for the state and its claimants.²²¹

Pasturage The livestock situation on smallholdings has been discussed above. It was clearly not sufficient; the cavalry, the army's supply trains, meat and milk products, parchment, and leather and wool artifacts all represented a considerable demand that could only be met by large-scale stock raising on the grazing lands of the state, then of villages and estates.

Little is known about the way stock raising was organized in Asia Minor, where it played a determining role. It often involved huge estates, many of which had been granted by the emperor to or secured some other way by the greatest Byzantine families, whose ownership went back to the ninth century.²²² The state bred its own horses and draft animals for the army on its Anatolian estates,²²³ though the army also requisitioned supplies locally in the course of an expedition. However, the single soldier and horse that peasant families were required to supply probably did not play as significant a role as did contributions from private and ecclesiastical estates, which must have been the principal purveyors of the horses and mules employed in the wars against the Arabs.²²⁴ Paphlagonia is also known as a major stock raising area, an important

²¹⁶ *Theodori Studitae Epistulae*, ed. G. Fatouros, 2 vols. (Berlin, 1992), 1:25–26, ep. 7; G. Dagron, "Poissons, pêcheurs et poissonniers de Constantinople," in Mango and Dagron, *Constantinople and Its Hinterland* (as above, note 125), 67–68; Dunn, "Woodland," 276; *Iviron*, 1: no. 9.

²¹⁷ Martin, *La Pouille*, 377 n. 314; Malamut, *Les îles*, 2:433; Daphnopates, *Correspondance*, 211–13; Dunn, "Woodland," 276–77.

²¹⁸ Dagron, "Poissons." On hunting and fishing in southern Italy and Macedonia, see the comments in Lefort and Martin, "Organisation," 24.

²¹⁹ *Actes d'Esphigménou*, ed. J. Lefort, Archives de l'Athos (Paris, 1973), no. 9.

²²⁰ *Iviron*, 1: no. 9.

²²¹ Cf. Harvey, *Economic Expansion*, 158; "Anthroponymie," 237; Malamut, *Les îles*, 2:433–34; *ODB*, s.v. "Fishing."

²²² Hendy, *Studies*, 55, 100–108; Haldon, *Seventh Century*, 156.

²²³ N. Oikonomides, *Les listes de préséance byzantines des IX^e et X^e siècles* (Paris, 1972), 338; Hendy, *Studies*, 611.

²²⁴ Cf. Lemerle, *Agrarian History*, 131–56; Hendy, *Studies*, 311.

source of provision in meat for the capital in the tenth century: cattle, pigs, sheep, donkeys, cows, and horses were driven to Nikomedeia and Pylai, whence they were sent by boat to Constantinople.²²⁵

Many of the uncultivated parts of the Balkans were also dedicated to stock raising, especially in the north, as well as the Peloponnese, which was required to supply a thousand horses for the Longobardia campaign at the beginning of the tenth century.²²⁶ This was also the case with some parts of Chalkidike, especially Mount Athos. When monks were installed there at the end of the ninth century, they came into conflict with the local herd owners, shepherds, and herdsmen who were accustomed to pasturing their animals on Mount Athos.²²⁷ The Kolobou monastery at Hierissos had fraudulently acquired ownership of almost the whole of Mount Athos by the end of the ninth century and turned it temporarily into a pastoral estate (*nomadikon proasteion*), part of which was used for its own herds and part rented out to the local owners of herds and flocks. Leo VI put an end to this situation in 908, but in 943 the inhabitants of the *kastron* of Hierissos, and in 972 the Kolobou monastery, maintained the right to shelter their animals on Mount Athos in the event of a hostile incursion. Indeed, the monastery of Lavra kept sheep there until the mid-eleventh century and was subsequently allowed to graze a herd of cows there.²²⁸ Away from Athos, the huge estate of Perigardikeia, more than 20,000 modioi in size, was also involved in stock raising in 1037; the owner was also entitled to graze his herds on neighboring lands.²²⁹

Once the Anatolian plateau had been lost, the Balkans played a major part in stock raising. In some cases at least, it is clear that there was a speculative side to aristocratic stock raising in the Balkans: it was not, in fact, limited to riding-horses, and the numbers of stock animals were in excess of private requirements, great though these must have been.²³⁰ In the region of Rhodope in 1083, the estates of Gregory Pakourianos included grazing lands (*nomadiaia ge*) and summer pasturages, on which were found: 110 horses, mares and foals; 15 donkeys, jennies and foals; 4 milch buffalo; 2 calves; the 47 pair of oxen referred to above, which were used by the estate farmers; 72 cows and bulls; 238 ewes; 94 rams; and 52 goats.²³¹ In 1089, the Xenophon monastery, or rather its second founder, a former great *droungarios tes viglas*, owned 14 yoke of oxen, 100 draft horses or donkeys, 130 buffalo, 150 cows, 2,000 goats and sheep on its estates in Chalkidike.²³² Around 1090–98, estates in Thrace and Macedonia belonging successively to Symbarios Pakourianos and his widow, Kale, also included grasslands, part of

²²⁵ Koder, *Eparchenbuch*, 15.3; J. Darrouzès, *Epistoliers byzantins du Xe siècle* (Paris, 1960), 209; Hendy, *Studies*, 55.

²²⁶ *De Administrando Imperio*, ed. G. Moravcsik, trans. R. Jenkins, 2 vols. (London–Washington, D.C., 1962–67), 52.

²²⁷ *Prôtaton*, no. 1 (883).

²²⁸ *Prôtaton*, nos. 2, 4, 7 and 8.

²²⁹ *Docheiariou*, no. 1; see Harvey, *Economic Expansion*, 154–55; Kaplan, *Les hommes et la terre*, 77–79.

²³⁰ Harvey, *Economic Expansion*, 153.

²³¹ Gautier, “Typikon de Grégoire Pakourianos,” 125.

²³² *Xénophon*, no. 1.

which was managed directly; an unknown number of oxen, cows, mares “in the mountain,” foals, horses, mules, sheep, and pigs were raised there.²³³ Other examples could be provided.²³⁴ In southern Italy, too, some monasteries kept large herds, the details of which have been preserved.²³⁵

Not much is known, however, about the way these grasslands were farmed and exploited. Summer pasturage (*planinai*), on the one hand, and winter grazing (*cheimadion*) in the hollows of the lowlands, on the other, had long been practiced, but the impression gained is that a regular system, involving transhumance and pastoral nomadism, was developed only in the eleventh century.²³⁶ This was the case in Asia Minor, where the Turkomans who spent their summers on the plateau, are known to have rented winter grazing within the land of the empire in the twelfth century.²³⁷ In the Balkans, since the eleventh century, transhumance was particularly associated with a seminomadic population of Vlachs, who were sometimes rather unruly and who specialized in stock raising. Ethnological descriptions of these people made at the beginning of the twentieth century correspond fairly well to information provided in Byzantine texts; in particular, they stress the role of women in food-processing work.²³⁸ There is evidence, too, for long-distance movement of herds, which the Byzantine reconquest made possible; at the end of the eleventh century, Kekaumenos refers to Vlachs in the region of Larissa in Thessaly, whose wives (who were on their own because their husbands had revolted) had left with their cattle to spend the summer, from April to September, in the mountains of “Bulgaria.”²³⁹ In other cases, the movement was mostly vertical: at the end of the twelfth century, near Moglena in western Macedonia, the Vlach shepherds who spent the summer on a *planina* experienced some trouble obtaining their winter grazing lands on the plain below, much of which was probably under intensive cultivation. Vlachs generally owned their flocks, but some of them may possibly have been employees of estate owners, who may also have owned herds. Maybe the mention of “Vlachs of Lavra,” for whom Lavra secured the free use of an imperial summer pasturage, refers to this sort of arrangement.²⁴⁰ Vlachs were primarily sheep breeders.

One etiological account, intended to explain why women and female animals are prohibited on Mount Athos, tells of Vlachs, especially shepherdesses dressed as shepherds,²⁴¹ who lived for a while in perfect symbiosis with the monks of the holy mountain, supplying them with cheese, milk, and wool,²⁴² and other things as well. The story

²³³ *Iviron*, 2:174.

²³⁴ Harvey, *Economic Expansion*, 151–57.

²³⁵ Martin, *La Pouille*, 384 and n. 344.

²³⁶ Harvey, *Economic Expansion*, 156–57 and n. 179; for a reference to pasturage rights “for the six months of winter” in a fiscal instruction dating from the 10th–11th centuries, see *Géométries*, § 54.

²³⁷ Magdalino, *Manuel*, 126.

²³⁸ M. Gyoni, “La transhumance des Vlaques balkaniques au Moyen Age,” *BSI* 12 (1951): 29–42.

²³⁹ Kekaumenos, *Strategikon*, sec. 185.

²⁴⁰ *Lavra*, 1: no. 66.

²⁴¹ Cf. Gyoni, “Transhumance,” 31: young girls wore trousers during the migrations.

²⁴² On Cretan and Vlach cheeses consumed in Constantinople during the 12th century and woolen coats woven by Vlach women, cf. *Poèmes prodromiques*, III, 52, 56; IV, 75, 83 (= Eideneier, III, 117–36).

goes that the emperor was keen to impose a tithe on them (as users of the grazing lands), but that he feared lest the regional fisc officials would take advantage of this to exact their customary levies from the monks. Following a moralizing intervention on the part of the patriarch, they ended by deciding to remove the Vlach women and their flocks definitively from Athos.²⁴³

In southern Italy there is evidence for limited displacement, sometimes toward summer pasturage; in the case of long-distance transhumance, there seems to be no continuity between the end of antiquity and the late Middle Ages,²⁴⁴ nor is there any evidence for such continuity in the Balkans and Asia Minor.

In the tenth century the state sometimes allowed villagers free disposal of uncultivated lands.²⁴⁵ Generally speaking, estate owners levied duties on shepherding (*mandriatikon*)²⁴⁶ and pasturage (*ennomion*) when they rented out their grasslands, the latter dues being in proportion to the size of the flock and higher for larger animals.²⁴⁷ *Ennomion* was paid in currency, though a tithe on the stock could be substituted, according to references from the tenth to the end of the twelfth century.²⁴⁸ The same applied to southern Italy, where *herbaticum* could constitute the seizure of a proportion of the stock, sometimes one animal in twenty.²⁴⁹

Some of the products derived from stockbreeding have already been mentioned. Ptochoprodromos asserts that clothes made of goats' hair and silk were much appreciated in town. In villages, the surnames of cobbler and weaver demonstrate the existence of rural craftsmanship in leather and textiles from the twelfth century on. By this time, however, a large proportion of the production was certainly sold to merchants; we know of the trade in cowhides and sheepskins in Crete during the thirteenth century.²⁵⁰

These seem to have been the most consistent features of agricultural and pastoral production. It could well be argued that the relative separation of agriculture and stock raising, as illustrated in the Balkans by the specialized role of the Vlachs,²⁵¹ constituted a weakness of the Byzantine rural economy. However, this is not proven. As we have seen, the peasants owned some head of cattle, and some peasants were engaged in large-scale stock raising on domanial grasslands. Indeed, by the end of our period and in the central regions of the empire, it is quite remarkable how all the economic activities of the countryside were integrated within the context of village and estate, which were often unified.

²⁴³ P. Meyer, *Die Haupturkunden für die Geschichte der Athosklöster* (Leipzig, 1874), 163–67. See M. Gyroni, "Les Vlaques du Mont Athos au début du XIIe siècle," *Etudes slaves et roumaines* 1 (1948): 30–42.

²⁴⁴ Martin, *La Pouille*, 377–80.

²⁴⁵ *Lavra*, 1: nos. 2 and 3.

²⁴⁶ *Lavra*, 1: no. 66; *Iviron*, 3: no. 54.

²⁴⁷ *Géométries*, § 54; *Iviron*, 2: no. 54; on *ennomion*, cf. *ODB*, s.v.

²⁴⁸ *Iviron*, 1: no. 9; *Peira*, 37; *Iviron*, 2: no. 47; *Lavra*, 1: no. 66.

²⁴⁹ Martin, *La Pouille*, 374.

²⁵⁰ *Poèmes prodromiques*, III, 52; *ODB*, s.v. "Goats," "Leather"; for Crete: data communicated by J.-C. Cheynet.

²⁵¹ The letter (mentioned above), sent by Gregory Antiochos to Eustathios of Thessalonike, stresses the importance of stock raising and the mediocre nature of agriculture in the region of Sardica: Darrouzès, "Deux lettres."

Matters had probably not always been thus. The rural economy of the seventh century was clearly quite different in many regions, more segmented and less prosperous than in the twelfth century. As we have seen, however, polyculture (mixed farming) and the overall range of agrarian techniques, which were adapted to both local conditions and smallholdings, enabled the development of production.

Developmental Factors

Demographic Growth and the Rise in Demand

Population Increase from the Ninth Century On It was long thought that the empire was never so densely populated as during the seventh and eighth centuries, as a result of the Slavic invasions, and that it fell victim to a demographic decline that started in the tenth or eleventh century, at the time of the empire's "feudalization."²⁵² More specifically, the incidence of "deserted" lands and habitats was seen as proof of this decline, although the explanation often lies in the precarious nature of peasant life and in the provisional nature of these desertions. The many abandoned lands redesignated *klasma* by the fisc, to which I shall return, and the many *exaleimmata* listed in fourteenth-century *praktika*, which point to the same reality, have long been interpreted as indicators of a permanent or steadily growing shortage of people. What they actually reveal, in some cases at least, are practices aimed at the best management of land occupancy.²⁵³ As in the case of lands with no heirs, which, according to the *Farmer's Law*,²⁵⁴ were redistributed by the commune, or of the "despotic fields" of Radolibos, referred to above, these deserted lands bear witness above all to individual misfortune. Peasants sometimes died without leaving heirs or moved away for whatever reason, giving rise to situations that obviously required legislation, registration, and decisions about reallocating the land. Cases of this kind feature largely in the legal and fiscal documents of the period, but it would not make sense to use them systematically as demographic indicators. As for the definitive desertion of habitats prior to the mid-fourteenth century, evidence for its occurrence in Macedonia has been culled from insufficient documentation; in western Chalkidike, at least, it was uncommon.²⁵⁵

W. Treadgold and, later, A. Harvey have stressed that the population grew during the period under discussion.²⁵⁶ This rise appears certain, thus profoundly modifying our picture of the Byzantine economy. While we have no secure data that would permit the population of the empire at any given time to be evaluated, we do know that it was always unevenly distributed. Research by M. Hendy into the distribution of cities during the Roman period and of bishoprics during the Byzantine period emphasizes the aforementioned contrast between coastal zones and lands in the interior, where there

²⁵² Cf. J. Lefort, "Population et peuplement en Macédoine Orientale, IXe–XVe siècle," in *Hommes et richesses* (as above, note 1), 2:64 and nn. 4 and 5.

²⁵³ Cf. M. Bartusis, "Εξάλειμμα: Escheat in Byzantium," *DOP* 40 (1986): 55–81.

²⁵⁴ Cf. Lemerle, *Agrarian History*, 42–45.

²⁵⁵ Lefort, "Population et peuplement," 79, table 3.

²⁵⁶ Treadgold, *Revival*, 360–62; Harvey, *Economic Expansion*, 35–79.

were fewer bishoprics. Cultivated sectors were naturally more densely populated than stock-raising regions.²⁵⁷

Numerous clues suggest that the population was dense in the sixth century²⁵⁸ and that it diminished in the seventh and eighth centuries, possibly at different rates in different regions and in unknown, though apparently considerable, proportions. The plague of 541/542 and its recurrences until 747 were certainly the principal cause of population decline, and the effects of the epidemics were aggravated by the insecurity that prevailed for long periods or frequently, and almost everywhere. The role of the plague is scarcely disputed, although it is not certain that it reduced the population by half, as has been claimed.²⁵⁹ Epidemics seem at any rate, to have had greater effect on population volume than wars, the negative effects of which were primarily to propagate the epidemics. Similarly, invasions did not lead to any considerable population increase, given their generally destructive impact and the low numbers of immigrants compared with the native population.²⁶⁰ Immigrants were used most efficiently by the emperors, who resorted to deportation in order to populate empty spaces on the frontiers or elsewhere. In the Balkans, Avar and Slav raids, followed by Slav invasions, and in Asia Minor, Persian attacks, followed by Arab incursions over two centuries, had in many places the effect not only of dispersing the population, discrediting the administration and notables, and weakening the urban network, but also of disorganizing the domanial and village framework within which the rural economy operated. Agriculture was maintained only with difficulty in times of war, even when war merely loomed, discouraging all investment in the land.

We are not well informed by the texts; they present a catastrophic vision of raids and invasions and their effects on the population, which must be treated with caution. However, as J. Haldon has emphasized, the importance accorded to the hereditary-lease contract (*emphyteusis*) in the *Ecloga*, a legal compilation dating from the mid-eighth century, suggests that labor was scarce in this period, because the contract favored the farmer.²⁶¹ We know, too, that the emperors settled Slavs in Asia Minor on several occasions, especially in Bithynia in 689 and 763, in order to levy soldiers from them for their wars against the Arabs, which shows that the countryside was, at that time, underpopulated, even near the capital.²⁶² As we have seen, the peninsula of Kassandra was

²⁵⁷ Hendy, *Studies*, 69–77.

²⁵⁸ Cf. A. E. Laiou, "The Human Resources," *EHB* 46ff.

²⁵⁹ For information about the role of the plague and about depopulation until the 9th century, see P. Charanis, *Studies on the Demography of the Byzantine Empire* (London, 1972), 1:10–13; P. Allen, "The Justinianic Plague," *Byzantion* 49 (1979): 1–20; J. Durliat, "La peste du VI^e siècle," in *Hommes et richesses* (as above, note 1), 1:107–19, with comments by J. N. Biraben, *ibid.*, 121–25; *ODB*, s.v. "Plague"; on the West, see J. N. Biraben and J. Le Goff, "La peste dans le Moyen Âge," *Annales ESC* 24 (1969): 1484–510; cf. J.-P. Sodini and C. Morrisson, "The Sixth Century Economy," *EHB* 187ff.

²⁶⁰ Cf. Charanis, "Observations," 14–15; J.-M. Martin, "Rapport," in *Hommes et richesses* (as above, note 1), 2:84–85.

²⁶¹ *Ecloga*, ed. L. Burgmann (Frankfurt, 1983), no. 12; on *emphyteusis*, evidence for which occurs well beforehand, see the analyses by Kaplan, *Les hommes et la terre*, 163–69; for the 8th century, see Haldon, *Seventh Century*, 134.

²⁶² H. Ditten, *Ethnische Verschiebungen zwischen der Balkanhalbinsel und Kleinasien vom Ende des 6. bis zur zweiten Hälfte des 9. Jahrhunderts* (Berlin, 1993), 220, 337.

depopulated in the middle of the tenth century, although much of it is good farmland. Other documents from Athos show that the region of Hierissos in eastern Chalkidike was also nearly deserted by the end of the ninth century.²⁶³ These are all important clues, but their overall value has yet to be demonstrated.

In any case, these clues are confirmed, in many places, by other data. For instance, that the ancient cities on the southern coast of present-day Turkey were abandoned prematurely is strikingly evident today.²⁶⁴ Palynological research and archaeological surveys have produced partial but coherent evidence to show that in Macedonia, Argolis, and Lycia a reduction in land use (cultivation or habitat) and a progression of the forest occurred during the Dark Ages. In addition, in Macedonia and Bithynia particularly, some terraces or entails of terraces, datable to this period, point to abandoned cultivation and a reversion to natural vegetation, and may be interpreted as evidence of a reduction in population pressure.²⁶⁵

This trend may have been reversed when the plague ended around the middle of the eighth century.²⁶⁶ Later on, enhanced security, the omnipresence of the army, and the restoration of a network of strongholds and small towns in the ninth and tenth centuries in Asia Minor and the Balkans favored a population growth that seems to have persisted until the beginning of the fourteenth century. This increase was certainly slow, due to the persistent lack of security in some regions, resulting, for instance, from piracy along the coasts, and due to the fragility of many peasant holdings everywhere. Weather hazards and other catastrophes sufficed to produce famine, which, though most frequently of a local nature, had serious consequences. The cold winter of 927/8, referred to both by chroniclers and in a novel of Romanos I in 934, played a major part in the history of Byzantine "feudalism." It brought about a famine that was followed by a "plague" and provided the "powerful" with the opportunity to buy land from the "weak" at low prices or for a little wheat.²⁶⁷ N. Svoronos has stressed other cases of famine in the first half of the eleventh century in Asia Minor and in Europe; they were often initiated by drought or hail and were accompanied by epidemics and population movements.²⁶⁸ It may have been the result of milder meteorological conditions or, more probably, the effect of improved security, a progressively less fragile economy, and a wider circulation of grain, but there appears to have been no famine in the twelfth century.²⁶⁹ At any rate, once security was reestablished, the short-term crises that periodically slowed demographic growth were never able to reverse this trend.

Although the signs pointing to population growth are often indirect, they are clear

²⁶³ *Iviron*, 1:29.

²⁶⁴ On Lycia, see C. Foss, "The Lycian Coast in the Byzantine Age," *DOP* 48 (1994): 1–52.

²⁶⁵ *Paysages de Macédoine*, 103–4; Dunn, "Woodland," 245–46; see B. Geyer, "Physical Factors in the Evolution of the Landscape and Land Use," *EHB* 41–42.

²⁶⁶ Treadgold, *Revival*, 36.

²⁶⁷ Lemerle, *Agrarian History*, 94–97; Svoronos, *Novelles*, 85–86.

²⁶⁸ N. Svoronos, "Société et organization intérieure dans l'empire byzantin au XI^e siècle: Les principaux problèmes," in *Etudes* (as above, note 1), art. 9, pp. 12–13.

²⁶⁹ Kazhdan, "Two Notes," 120, Magdalino, *Manuel*, 142.

enough. Towns reappeared, the number of bishoprics grew between the seventh and ninth centuries,²⁷⁰ and, as we shall see, hamlets were constantly established, often by large proprietors, between the tenth and mid-fourteenth centuries, all of which suggests a more abundant population. In Macedonia the fiscal documents that enable us to compare the number of hearths in nine villages or hamlets between the beginning of the twelfth and the beginning of the fourteenth centuries indicate that the population had grown considerably, on average by 82%.²⁷¹ Once the additional resources obtained by implementing the best agricultural techniques in this geographical environment had been exhausted, a growing population would imply an increase in the area under cultivation. Indeed, it would have almost doubled over two centuries, if the data relating to Macedonia are significant; over time, the extension of crops might have effected a shift in the location of grazing lands and pushed back the woodlands.

In Macedonia, indeed, there is evidence that all this did happen on a scale significant enough to be traced in the sequence of documents dating to between the eleventh and fourteenth centuries. In some places, the multiplication of fields prior to the fourteenth century led to the formation of cereal-growing land units that spread beyond the bounds of the estates to eliminate the last remnants of natural vegetation.²⁷² In western Chalkidike, texts, ceramic finds, and geographical data all suggest that here, too, the area under cultivation was extended further in the fourteenth century than at the beginning of the twelfth or even during the proto-Byzantine period.²⁷³ The increase in the cultivated area reduced the spaces at the base of slopes that had been given over to pasturage and woodland, and apparently resulted in the systematic practice of summer pasturage, referred to above, from the eleventh century on. During the twelfth century, at Radolibos and in neighboring villages, the uncultivated area leading into the hills became insufficient, and the peasants of eight villages, not including those of Radolibos, then took to using the slopes of Pangaion for cutting wood and pasturing their cattle in summer, evidence for which is found in the dues they paid Iveron for usage of the *planina: ennomion, mandriatikon, and orike*.²⁷⁴ Finally, in Macedonia, evidence that farming the slopes had pushed back the forest between the eleventh and fourteenth centuries is suggested by documents for the areas east of Amphipolis and, in the twelfth century, north of Lake Langadas.²⁷⁵

This evidence from the Athonite archives is confirmed by palynological and archaeological research, as itemized by Dunn, showing that the forest in western Macedonia started to recede in 850, or ca. 1000 on another site, in Thessaly ca. 900, in Lycia before the millennium, in eastern Macedonia near Lake Bolbe, in Thrace, and in Argolis at dates prior to the fourteenth century.²⁷⁶ This set of facts points to a rise in population as marked as the drop in population had been in the seventh and eighth centuries.

²⁷⁰ Hendy, *Studies*, 77.

²⁷¹ Lefort, "Population et peuplement," 74.

²⁷² *Paysages de Macédoine*, 109, 112 and n. 50.

²⁷³ *Ibid.*, 111–12.

²⁷⁴ *Iviron*, 3: no. 54.

²⁷⁵ *Paysages de Macédoine*, 110–11, 114.

²⁷⁶ Dunn, "Woodland," 244–46.

Some clues, linked to information about the spread of cultivation and the forest cover in the region of Thessalonike, tend to confirm that at the beginning of the fourteenth century the population was at least as dense in Macedonia as it may have been in the sixth century.²⁷⁷ These demographic phenomena were probably more extensive in the coastal regions than in the northern Balkans or on the Anatolian plateau, which were more remote and less populous.

The Rise in Demand from the Tenth Century On Of course, the demographic increase was the main factor in the development of the rural economy, which had to provide the peasants with a subsistence in good years and bad. However, the automatic effect of a larger population was amplified by the demand from a growing number of people who did not produce much or at all. The army had eventually been shown to be more efficient when making better use of the cavalry, and its needs had increased. The monasteries were developing, as were the towns and administration; the ever more numerous aristocracy was imitating the luxurious ways of the court, which in turn was increasing in size—all these developments put pressure on agriculture to produce enough to feed all these nonpeasants, some of whom at least required very superior homes, food, and clothes.²⁷⁸ Indeed, without exploring these questions further, it must be stressed that these changes had a very significant effect on the rural economy. I noted earlier how agricultural practices permitted a degree of progress that was implemented and resulted in what was probably the greatest possible increase in yields. I also suggested that the response to growing demand was to increase still further the area under cultivation, a development that was, at any rate, inevitable.

Increasing the Area under Cultivation The texts seldom refer explicitly to land clearance. For instance, the *Farmer's Law* refers to it twice within the context of village life.²⁷⁹ Studying the cadaster of Radolibos also shows how, prior to the twelfth century, clearance work had begun on some of the less advantageous parts of the territory, which were possibly still partly wooded, and had opened up some small fields.²⁸⁰ Given the very small size and dispersed location of these fields, it is likely that they were created on the initiative and at the expense, not of the estate master, but of the peasants. An old delineation of property for Radolibos, dating from the time before the village became an estate, refers to a field on the plain that was cleared (*hylokopethen*) by a peasant called Pantoleon, son-in-law of Dobrobetes.²⁸¹ Another allusion, not to cleared land, but to the development of an estate in *The Life of Michael Maleinos*, is instructive: Manuel Maleinos (Michael was his name as a monk), uncle of Emperor Nikephoros II Phokas, had purchased ca. 925 some land close to Mount Kyminas in Paphlagonia, in order to build a monastery. He developed the land so well that he “turned the desert into a

²⁷⁷ See above, 264; also Lefort, “Radolibos,” 215.

²⁷⁸ Harvey, *Economic Expansion*, 163–97.

²⁷⁹ *Farmer's Law*, § 17 and 20.

²⁸⁰ Lefort, “Radolibos,” 215.

²⁸¹ *Iviron*, 2: no. 48.

town.”²⁸² A more specific account is provided by Eustathios Boilas in his will of 1059, which states that he had cleared an estate in eastern Anatolia that had been covered in impenetrable forest, creating meadows, orchards, vineyards, and gardens,²⁸³ using his slaves or *paroikoi* to carry out the work.

Despite the documents’ silence on the subject, there are many clues suggesting that clearings were significant, both in villages and on estates. Though work on the estates was probably carried out with the authorization of the master of the place, it could be initiated by him or by the peasants, as we have seen. The work must generally have been carried out by the latter in order to enlarge their holdings or to create new farms; not much information is available, however. Similarly, we can only suppose that more land was cleared after the tenth century than before, for the reasons given above.

The area under cultivation was extended either around existing habitation sites or, alternatively, in isolated spots, in which case it involved creating a new hamlet. In the first case, the work scarcely features in the sources and is hard to date; its existence can only be deduced from the increased number of farms. We have seen how in Radolimbos the parts of the estate that were hardest to work were cleared before the twelfth century. When clearance work was linked to the foundation of a hamlet or an isolated farm, it is more likely to appear in the texts, often under the term *agridion*, which refers to a small estate. The author of the *Fiscal Treatise* provides a commentary on this term, revealing some of the reasons why habitats could multiply, in a context that clearly points to demographic rise. In this respect, he refers to the “development” and the resulting “improvements,” implying clearance work in particular:

... *agridia* are formed, either because some villagers did not wish to remain in the village, or because they did not own as many interior enclosures (*enthuria peribolia*) as the others, for which reason they removed their homes to a part of the village territory, developed it (*kalliergo*), and set themselves up there. Perhaps the fathers of some of these people had died leaving many children, and had left some of them lands within (*esothyra*), which they held in the village, and to others their lands outside (*exothyra*); thus those who had received their share of the inheritance outside the village (*exochoria*), since they could not reside and dwell far from their share, have removed their homes and improved (*beltio*) the terrain, turning it into an *agridion*. Still others, because of either the quantity of their cattle and the number of their slaves, or the ill-will of their neighbors and their inability to remain in the same village, have moved to a part of the village territory and have made improvements in the same way, constituting an *agridion*. One could, by searching, find many reasons for establishing *agridia*.²⁸⁴

Noteworthy are those peasants who did not own enough farmland near the village and found some further off that they cultivated (free of dues, though they might eventually be taxed): those who belonged to large families that could not house all their

²⁸² *Vie et office de Michel Maléinos*, ed. L. Petit (Paris, 1903), chap. 15; Kaplan, *Les hommes et la terre*, 302.

²⁸³ Lemerle, *Cinq études*, 22.

²⁸⁴ *Fiscal Treatise*, 115.

children, obliging some of them to exploit a land that they had inherited but was too remote; and those who were landowners (and wealthier?) with cattle and slaves, who were also interested in the margins of the village territory. According to this text, the development of the boundary lands was carried out within the social framework of a grouped village, which features as the original habitation site.

Thanks to the Athonite archives, we are fairly well informed about the foundation of small estates on the margins of village territories in Macedonia. These were founded by monks or lay persons and are recorded as early as the ninth century. In 866 a powerful man, John Kolobos, erected a small monastic establishment on the territory of Siderokausia in Chalkidike, close to which *paroikoi* were installed toward the middle of the tenth century.²⁸⁵ The foundation of new estates was probably made easier following the state's decision at the beginning of the tenth century to sell village land that had fallen into escheat (*klasma*), in certain cases. We know that the origins of several estates that were obviously developed for farming lie here; for instance, the estate of Lavra at Kassandra was purchased from the fisc in 941.²⁸⁶

The foundation of a hamlet can sometimes be given an approximate date, as in the case of the huge territory of Polygyros in Chalkidike, which at that time had domanial status; the hamlets of Alopochorion and St. George were established there prior to 1047, and that of St. Lazaros or Lazarochorion between 1047 and 1079.²⁸⁷ Generally, however, we can only record the date when these new habitation sites appear in the documentation. Research, as yet incomplete, into the Athonite archives has produced a dozen such created before the year 1000, fifteen before 1100, though only a few in the twelfth century on account of the scanty documentation, fifteen again in the thirteenth century, and a dozen between 1300 and 1350 (within an economic context that had become unfavorable). We are thus dealing with a continuous phenomenon that modified soil occupancy to a considerable extent. These estates were not very extensive and may have averaged 1,000 modioi; they generally had no forest or pasturage reserves and were dedicated primarily to growing cereals. They comprised, apart from the master's house, a hamlet inhabited by *paroikoi* that was generally small, at between ten and twenty hearths at the beginning of the fourteenth century.

In the tenth to twelfth centuries, these estates tended to be sited downhill from the villages, toward the middle of low-lying land that had hitherto been too exposed and could now be farmed thanks to the improved security. This trend also shows that the more fertile lands were initially exploited, although the soil was often heavy and hard to plow. In this case, the gain in area and the fertility of the land combined to increase production. The choice of uphill sites, generally on poorer soil, often appears to date from the thirteenth and fourteenth centuries and to be due to an increase in the pressure of population.²⁸⁸ When account is taken of the regional differences in the type of habitat associated with newly cultivated zones, the same situation occurred in southern

²⁸⁵ *Prôtaton*, 36; *Iviron*, 1: no. 9.

²⁸⁶ *Lavra*, 1: no. 2.

²⁸⁷ *Iviron*, 1: no. 29, and 2: no. 41.

²⁸⁸ Lefort, "Population et peuplement," 69–72.

Italy, where the *casalia* are comparable to Byzantine *agridia*, and shared a degree of fragility with them, since some of these disappeared even before the fourteenth century.²⁸⁹

In Bithynia, practically no documents from Byzantine archives have survived, and other methods of investigation have been sought. B. Geyer's current research has already produced evidence for an increase in the cultivated area on the lower terraces around the lake of Nicaea during the period under discussion. Numerous clues, including carbonaceous deposits dated by means of carbon 14, show that the level of the lake varied over a range of more than 4 m in historical times. In addition, geographical and archaeological data suggest that the lowest levels were not natural but were linked to the excavation of an artificial outlet in the coastal strip that contained the lake to the west. Lowering the level of the lake enabled large areas of fertile land to be secured for agriculture because the slope was very gentle. However, the outlet would have had to be maintained, because sediment carried by the lake currents would have soon caused it to silt up.

While awaiting the definitive results of this research, three facts appear to have been established. (1) The artificial outlet, which was probably installed by means of large marble blocks, some of which remain, dates from the Roman period. Various archaeological evidence confirms the existence of a low water level from the beginning of our era until at least the sixth century: the Roman road (restored under Nero) that runs along the southern side of the lake adopts a low route in several places; two habitation sites that have been identified through pottery finds and one probable funerary site, all dating from the later Roman period, are at the same altitude. (2) The existence of a high water level after the previous lower level is proven in several places by carbonaceous deposits, for instance on the lakeside ramparts of Nicaea, which will perhaps be dated to the high Middle Ages, and are in any case earlier than the twelfth century. This high level during the early Middle Ages means that the outlet was no longer being maintained, probably because the loss of large tracts of farmland on the shores of the lake was tolerable at the time on account of the fall in population, although the new water level must have caused problems within Nicaea, at least in the parts of town nearest the lake (indeed, there seem to have been no medieval buildings there). (3) A low water level is dated earlier than the thirteenth century from some pottery found on a site close to the village of Keramet, north of the lake. The existence of this low medieval level implies that some work was done to clear the outlet; regular maintenance would enable vast tracts of farmland to be recovered.

Once reliable datings are available and other material has been supplied by palynology, the study of vegetable macro-remains and of the region's alluvial formations, we will be able to refine our analysis and establish the chronology of the phases of intensive exploitation or of low soil occupancy in the region of Nicaea. However, the important point here is that hydraulic work is known to have been undertaken during the period under discussion and that it contributed toward extending the area under cultivation.

²⁸⁹ Lefort and Martin, "Organisation," 15; Martin, *La Pouille*, 269.

The reconquest of northern Syria during the second half of the tenth century was followed by a policy of repopulating the countryside and of building up the rural economy, organized by the state. This helps explain why the region was so prosperous during the first half of the eleventh century.²⁹⁰ B. Martin-Hisard concludes her analysis of the archives of the St. Shio monastery with the observation that in Georgia, in a different institutional context from that of the Byzantine Empire, it may be possible to identify “some signs of a transformation in the life and rural economy of the countryside, between the ninth and thirteenth centuries, such as reorganized habitation sites, the exploitation of new lands, technical advances, and openings for trade.”²⁹¹ The signs are that the trend to extend the area under cultivation constituted a general phenomenon, in both the eastern Mediterranean and elsewhere.

The Role of the Village Structure

Until the tenth century, the village, both as habitation site and as social structure, appears to have played a predominant role in a rural economy that was characterized by low levels of demand and monetization. Admittedly, the documents only reported on the village social structure when it fell to pieces, and it is difficult to assess its importance and reconstruct its features in an earlier period on the basis of legal and literary texts.

The Village as Habitation Site The *Fiscal Treatise* presents a dispersed rural habitation site, called *ktesis*, in the following terms: the houses are “very isolated from each other, each on its own little property (*ktesidion*).” We have few examples of such a dispersed form of habitation site, which the text contrasts with *chorion*, defined as a group: “the houses are in the same place, next door to each other.”²⁹² It is generally supposed that grouped habitation sites (where the houses stood more or less close together, possibly depending on the nature of the topography) and open ones were the rule in the countryside, as was the case in northern Syria in the seventh century, in Macedonia in the tenth, and in Byzantine Apulia.²⁹³ In fact, regional diversity must have been important, and peasants may have formed new groups in some places during the period under consideration.

²⁹⁰ For information, principally about the demographic aspects of this reconstruction, see G. Dargon, “Minorités ethniques et religieuses dans l’Orient byzantin à la fin du Xe et au XIe siècle: L’immigration syrienne,” *TM* 6 (1976): 177–216. For southern Italy, see A. Guillou, “Production and Profits in the Byzantine Province of Italy (Tenth to Eleventh Centuries): An Expanding Society,” *DOP* 28 (1974): 91–109.

²⁹¹ B. Martin-Hisard, “Les biens d’un monastère géorgien (IXe–XIIIe siècle),” in *Hommes et richesses* (as above, note 1), 2:137.

²⁹² *Fiscal Treatise*, 115. In the 6th century, however, John of Ephesos alluded to a mountain village in the region of Melitene that consisted of dispersed hamlets and isolated houses, but this seems to have been an exceptional case; cf. Patlagean, *Pauvreté économique*, 241; Kaplan, *Les hommes et la terre*, 111.

²⁹³ Tate, “Les campagnes,” 67; Lefort, “Habitat rural,” 254–56; Martin, *La Pouille*, 269; Kaplan, *Les hommes et la terre*, 115–17.

In any case, during the ninth and tenth centuries, the village as a grouped habitation site with its territory seems in general to have constituted the predominant form of habitation site and of soil occupancy. In Bithynia, saints' lives and other texts show that, by the ninth century, the village was the usual form of rural habitation site, and there are reasons for thinking that the tight network formed by the villages in the fifteenth century was already in place by the thirteenth, if not earlier.²⁹⁴ The same structure can be deduced for tenth-century Taurus, from the *Treatise on Guerrilla Warfare* by Nikephoros Phokas.²⁹⁵ In Apulia, villages formed a dense network around Bari, and some sites were very populous by the beginning of the eleventh century.²⁹⁶

The same applied to Macedonia, where fiscal documents contain delineations of property that allow the village territories to be mapped. In western Chalkidike, a village could be found every 4 or 5 km, often with a territory of 20 km². These villages were generally situated at the foot of mountains, in which case their territory would combine mountain and lowland parts. Of course, village networks were not everywhere as dense. We have no information about village populations, which must have varied greatly. In fourteenth-century Macedonia, they comprised perhaps seventy hearths on average, but previously were less well populated. It is possible that the heads of fourteen hearths in Radochosta, who "all, from the smallest to the greatest," placed their *signon* at the head of a document, represented all the hearths in the village at the beginning of the eleventh century.²⁹⁷

In places where the existence of a village network has been ascertained for the proto-Byzantine period, one may assume, following J. Haldon, a continuity of habitat, the troubled seventh and eighth centuries notwithstanding.²⁹⁸ This was, for instance, the case in Galatia, insofar as can be discerned via the Life of Theodore of Sykeon; here the rural space was made up, at the beginning of the seventh century, of former village territories, between which were inserted ecclesiastical estates. The same applied to Thrace, in the Taurus region, and in northern Syria where G. Dagron has emphasized the existence, between village and city, of towns that were all the more important when the cities were either in decline or remote, and when the towns were sited along the main roads.²⁹⁹ The existence of these towns is also attested at a later period;³⁰⁰ Radolibos was one such town, situated on the Via Egnatia.

In Macedonia, during the Roman and early Byzantine periods, apart from the cities, important rural agglomerations (*vici*?) can be identified as well as smaller settlements that are clearly distinguished by the area over which pottery can be found in the fields.

²⁹⁴ J. Lefort, "Tableau de la Bithynie au XIII^e siècle," in *The Ottoman Emirate (1300–1389)*, ed. E. Zachariadou (Rethymnon, 1993), 105–9.

²⁹⁵ G. Dagron, *Le traité sur la guérilla de l'empereur Nicéphore Phocas* (Paris, 1986), 228.

²⁹⁶ Martin, *La Pouille*, 268–69.

²⁹⁷ *Lavra*, 1: no. 14.

²⁹⁸ Haldon, *Seventh Century*, 136, insists on the continuity of "basic structure and social organization."

²⁹⁹ G. Dagron, "Entre village et cité: La bourgade rurale des IV^e–VII^e siècles en Orient," *Koinonia* 3 (1979): 29–52; Kaplan, *Les hommes et la terre*, 90–93.

³⁰⁰ Kaplan, *Les hommes et la terre*, 102.

Both here and in other regions, this framework of rural life was disrupted when Slavs settled in at the beginning of the seventh century. In the Thessalonike region, however, the most insecure period lasted only thirty-four years (586–620), and agrarian structures were sometimes maintained, as is suggested by the permanence of some city names in western Chalkidike that were transferred to Byzantine villages;³⁰¹ the transformation of an ancient city into a medieval village has also been observed in other regions.³⁰² Once they had arrived in Macedonia, the Slavs, who had long been used to living grouped in small villages, began by keeping to their traditional form of habitation site, its internal organization, and favored locations.³⁰³ However, they went on to join agricultural territories that had already been developed, whether abandoned or resettled, and by the beginning of the tenth century one may observe the existence of mixed Greco-Slav villages near Thessalonike.³⁰⁴ While the end result is clear enough, the modalities of the passage from ancient agrarian structures to the tenth-century village are unknown, and not solely for Macedonia.

Over the whole Mediterranean world, southern Italy, Greece, the Aegean, and the southeastern part of Asia Minor in particular, both textual and archaeological sources reveal the existence of surrounding walls that often seem to have been associated with villages.³⁰⁵ The tenth-century *Treatise on Guerrilla Warfare* reveals a possible function; in the event of a threat from the Arabs, the army would help the villagers (*choritai*) to fall back onto a naturally defensible site or into a fortified place of refuge (*kataphygion*) with their families, livestock, movables, and supplies for four months.³⁰⁶ Similarly, in Chalkidike at the end of the tenth century, a document tells of peasants who had fled their villages after they had been destroyed by Bulgars and took refuge on a neighboring estate because the place was defended. In response to questions posed by the judge in the course of a lawsuit in which they were only witnesses, they declared as follows (for once, peasants had their say):

“[We come from] villages that lie beyond the mountains, Resetinikeia, Batoneia, Mousdolokou, and other villages; because our villages were destroyed by Bulgars, we took refuge on the land of the Polygyros monastery, also known as ton Chabounion, since the place is protected (*dia ten ochyroteta tou topou*), but we are paying the dues (*epereiai*) that were imposed on us long ago and the taxes (*tele*), according to what each one owes, for our hereditary villages.”³⁰⁷

³⁰¹ Cf. Lefort, *Chalcidique occidentale*, s.vv. “Aineia,” “Antigonia,” “Bolbos.”

³⁰² Kaplan, *Les hommes et la terre*, 93. This phenomenon recurred later on, when some 11th-century *kastra* became *choria* in the 14th century.

³⁰³ Cf. Popović, “Habitat paléoslave.”

³⁰⁴ Kameniates, *De expugnatione Thessalonicae*, ed. G. Böhlting (Berlin–New York, 1973), 8; F. Brunet, “Sur l'hellénisation des toponymes slaves en Macédoine,” *TM* 9 (1985): 257.

³⁰⁵ Calabria, work in progress by G. Noyé; Macedonia, Lefort, “Population et peuplement,” 68 and n. 25; Chios, M. Ballance et al., *Excavations in Chios, Byzantine Emporion* (Oxford, 1989); Samos, K. Tsakos, “Συμβολή στην παλαιοχριστιανική καὶ πρώιμη βυζαντινὴ μνημειογραφία τῆς Σάμου,” *Ἀρχ. Ἐφ.* (1979): 11–25; Thasos, S. Dadake and C. Giros, “Ἀρχαιολογικὸς χάρτης Θάσου, Βυζαντινοὶ χρόνοι,” *Ἀρχαιολογικὸ Ἔργο στὴ Μακεδονία καὶ Θράκη* 5 (1991): 385–86; on Asia Minor, cf. note 306.

³⁰⁶ Dagron, *Guerrilla*, 228–29.

³⁰⁷ *Iviron*, 1: no. 10.

The rest of the text tells how the villagers who had been settled on the Polygyros estate were farming the land, supplying the monastery with the harvest share (*geiomora*) and pasturage rights (*nomistra*) that had been agreed on. The important point here is that they continued to pay the taxes for their hereditary villages, to which they clearly meant to return once it was safe to do so.

The dual nature of peasant habitation sites illustrated above, involving a permanent village habitat in times of peace and a place of refuge in times of war, was surely not the rule, but does seem to have been common. The effect must have been to strengthen the social structure of the village. In Calabria and Macedonia, the surrounding walls that have been identified during surveys are large and always on elevated sites, often invisible from the plain, and they frequently dominate medieval villages. Most of these places of refuge seem to have been built or at least occupied in the sixth and seventh centuries. They are always roughly constructed, whether or not masonry was involved. At Radolibos, the surrounding wall, known as Kales, towers 400 m above the present, formerly Byzantine, village. It is a dry-stone construction with a tower. Shards and bronze coins have been found there, dating from the early Byzantine period (fourth century). Houses had been built within the walls and graves laid below; for a while at least, this had been a permanent habitation site.³⁰⁸ By the fourth century, we know that local military leaders were fortifying villages in threatened regions, under guise of their patronage function. The army under Theodosios I and then Justinian did likewise, and these fortifications often remained distinct from regular habitation sites.³⁰⁹ They may also have been erected by local lords in zones that were not under state control. In either case, such places of refuge, whether temporary or not, must have helped strengthen or create Byzantine village networks in times of obvious social discontinuity. In southern Italy, where village structures seem to have been unobtrusive in the sixth century, and more generally wherever habitation sites were dispersed, peasants would have assembled periodically in these fortified places of refuge and thus may have fostered new groupings of habitats.

Peasants who were threatened by enemies, forced to move on by famine, or simply pursued by the fisc were very mobile during the earliest periods, as has been noted above. This mobility was increased by deportations ordered by the emperor. In some cases, it muddled legal situations or reduced their significance. In troubled times, numerous peasants could at any given time be held to own the property they were farming, irrespective of the land's previous status, and this may have helped crystallize village structures. What is more, the provincial army's soldiers often came from villages in which their families were living. This point is too important to be developed here, but the ties between army and village, emphasized by the tax status of military families (*oikoi stratiotikoi*) and military lands (*stratiotika ktemata*),³¹⁰ also contributed toward pro-

³⁰⁸ N. Zekos, "Προανασκαφικές έρευνες στὸ Ροδολίβος καὶ σὴν περιοχὴ του," Ὁρφέας 8/9 (1983): cf. 8–11.

³⁰⁹ Dagron, "Entre village et cité," 43–44.

³¹⁰ On the question of the στρατιωτικὰ κτήματα, see in the last instance J. Haldon, "Military Service, Military Lands, and the Status of Soldiers: Current Problems and Interpretations," *DOP* 47 (1993): 1–67.

tecting and strengthening the structure of the village, sometimes creating or reestablishing it when populations were moved.

The Economic Function of the Village, Considered as Social Structure The village as an institution was adapted to a period when land was not much farmed on account of the general insecurity and the low pressure of population. It provided the rural population with a means of self-defense, on which the state relied for both winning back its territory and raising taxes, as well as a structure aimed at the production of goods. From the seventh to the tenth centuries, it helped maintain the continuity of both farmlands and the rural economy.

The Village Commune Although our information is not very reliable, by the seventh century, probably the greater part of agricultural production was undertaken by villagers, the village being the context in which the rural economy gradually picked up. There was more to a village than the sum of its holdings; it was also a community or commune (*koinotes tou choriou*), which administered a territory that could often be vast. Indeed, while the community aspect of the village has previously been exaggerated, it is now probably underestimated. It is likely true that the village, if not the world of “ill-will” propounded by the *Fiscal Treatise*, was nevertheless an egalitarian environment that sometimes evinced individualistic tendencies instead of solidarity. Contrasted with a fourteenth-century peasant, who would have been caught up in a whole set of relations with his kin as well as engaging in commercial exchanges, his tenth-century counterpart seems to have had no ties apart from his father, from whom he inherited his land rights.³¹¹

In spite of this, the village was a social environment in which common interests existed. The limits of the village territory were marked by boundary stones and were described in the delineations of property (*periorismoi*) that were established by the fisc, as in Roman times.³¹² The oldest preserved boundary record is for Siderokausia in Chalkidike and dates from the beginning of the tenth century.³¹³ The boundary line, or rather, the farming of lands close to it, was a cause of conflict between neighboring villages, as in Galatia at the beginning of the seventh century and, later on, between villages and great landowners in Macedonia.³¹⁴ The uncultivated part of the territory that had not been appropriated was owned collectively by the villagers. “Common land” and common usage of uncultivated land are mentioned in the *Farmer’s Law* and in some documents.³¹⁵ Users of communal grasslands and forests, whether the villagers themselves, or the powerful, or strangers to the village, all had to pay dues to the state, in this case taxes, as they also did on the estates.³¹⁶

Defending the rights of the village against initiatives by neighbors made the village

³¹¹ “Anthroponymie,” 231.

³¹² *Géométries*, 16–19.

³¹³ *Iviron*, 1: no. 9.

³¹⁴ *Vie de Théodore de Sykéôn*, § 150; *Farmer’s Law*, § 7; *Prôtaton*, no. 5.

³¹⁵ *Farmer’s Law*, § 81 (τόπος κοινός); *Iviron*, 1: no. 5 (κοινοτόπιον).

³¹⁶ *Iviron*, 1: no. 9 (βαλάνιστρον and other ἐννόμια).

into a legal entity, *de facto* if not *de jure*. Furthermore, the need to manage its territory implied a minimum of organization. We find, if not a council, a representative elite, the “first” of the village,³¹⁷ in the villages of Galatia and Paphlagonia in the seventh to ninth centuries that turns up again in twelfth-century Macedonia in a domanial context.³¹⁸ A document from the beginning of the twelfth century also refers to the head (*proestos*) of a village that had become domanial, as the person who negotiated with the administration.³¹⁹ It is true that the few tenth-century documents that refer to the rural commune emphasize the collective nature of decision making.³²⁰

As a commune, the village owned land, often plots that had fallen into escheat and would eventually be reattributed to a villager in order to meet the requirements of the fisc, as mentioned above. However, the commune could also sell or acquire land. It would also institute proceedings;³²¹ a crowd (*plethos*) of petitioners would come before the judge, screaming too vociferously for his taste, or they would send a delegation.³²² Again, it was presumably the commune that allotted shares in the use of irrigation water.³²³ In the seventh century, the inhabitants of a village in Galatia apparently paid workmen to build a bridge across the torrent that flowed through their village.³²⁴ According to the *Farmer's Law*, the commune might also be responsible for mills, and in fact there was a mill on the Dobrokibeia territory toward the beginning of the eleventh century, the taxes for which were owed by the village commune.³²⁵ All these facts imply concerted effort and an organization, but one cannot specify the forms of a communal power that must have existed. It was only in the little towns, such as Hierissos, that the commune attained a perceptible level of development;³²⁶ its organization was surely more rudimentary in the countryside.

The villages also included certain forms of association; I alluded above to the mutual help arrangements that probably existed between *boidatoi* for plowing. In addition to this, villagers would sometimes entrust their herds and swine to salaried herdsmen.³²⁷

In economic terms, communal and associative practices of this type may have had only limited significance, but they were nevertheless important in a very insecure age. In this respect, the village later functioned as a managerial entity in the rural economy, although to a lesser extent than the estate. Although this management must have been minimal and partly inspired by the demands of the fisc, comprising only a few forms of mutual help and exchange and not designed to foster initiatives, the very existence of the village and rural commune made peasant holdings less precarious. In much the

³¹⁷ *Vie de Théodore de Sykéôn*, § 114 (οἱ . . . τὰ πρῶτα τελοῦντες) and 115 (οἱ πρῶτοι); *Vie de Philarète*, 137.

³¹⁸ *Iviron*, 3: no. 55 b (γέροντες).

³¹⁹ *Iviron*, 2: no. 51.

³²⁰ *Iviron*, 1: no. 9; *Lavra*, 1: no. 14.

³²¹ Kaplan, *Les hommes et la terre*, 187–88, 193.

³²² *Iviron*, 1: no. 9; *Prôtaton*, nos. 2 and 4.

³²³ *Iviron*, 1: no. 9.

³²⁴ *Vie de Théodore de Sykéôn*, § 43.

³²⁵ *Farmer's Law*, § 81; *Iviron*, 1: no. 30. See also below, note 456.

³²⁶ Cf. *Iviron*, 1:131.

³²⁷ Cf. above, 229 and n. 11; Kaplan, *Les hommes et la terre*, 195–97.

same way as the places of refuge, these practices help us understand the beginnings of economic growth.

The Commune and the State From the state's point of view, the commune was primarily a fiscal jurisdiction, on which the administration relied for collecting taxes when the city framework failed. Furthermore, since the state adhered to the principle, inherited from the late Roman Empire, of the village's collective responsibility for paying taxes, the commune may have been granted some powers of a fiscal nature. Thus when taxpayers disappeared, their tax liability was distributed among the remaining contributors, which increased the tax burden on them. This collective responsibility is alluded to in the *Farmer's Law*³²⁸ and, much more precisely, in the *Fiscal Treatise*.

However, the *Fiscal Treatise*, like the documents, refers primarily to the measures adopted by the fisc, such as tax exemptions (*sympatheiai*) and relief (*kouphismoï*), precisely to avoid the perverse effects of a system that could induce overtaxed peasants to run away when the tax collectors were passing.

Exemptions . . . are granted in cases of great poverty on the part of the taxpayer or the whole region . . . taxes are remitted following a petition by these same taxpayers and in virtue of imperial philanthropy. . . . in fact, in order that those who have fallen into extreme poverty should not depart on account of this poverty, they are exempted by the assessor as far as is required. . . . It is said that relief is granted when the heirs [to holdings] have left, although it is not unknown that they are living somewhere in the neighborhood and where they are established. . . . The assessor, in order to prevent those inhabitants who have remained in the village from leaving on account of their collective tax liability . . . decrees provisional relief on the fiscal units for which those who left owe tax.³²⁹

Dispensations and tax relief strengthened the commune.

It is true that, by the beginning of the tenth century, the state was adopting fiscal measures that had the opposite effect and that, during the eleventh century, enabled domanial organizations to replace communal organizations in many cases. Thus they announce an important turning point in the history of the rural economy, although the effect was not immediate. The decision to alienate in the state's favor all land that had paid no tax for the last thirty years (*klasma*, the detached part) did in fact result in a retrenchment of the commune's territory. The first reference to klasmatic land occurs in 908.³³⁰ Indeed, plans to adopt this type of measure may have been considered at the end of the ninth century under Basil I.³³¹ As a fiscal policy, it could perhaps also pass as an expression of compassion for the village community, by definitively removing the taxes that bore on unproductive land, though its main effect was to destroy the commune's territorial unity. In fact, the emperor was entitled, in principle after thirty

³²⁸ Lemerle, *Agrarian History*, 41; Kaplan, *Les hommes et la terre*, 211–12.

³²⁹ *Fiscal Treatise*, 119; cf. *Iviron*, 1: no. 30; 2: no. 48 (συμπαθείαι).

³³⁰ *Prôtaton*, no. 2.

³³¹ Lemerle, *Agrarian History*, 71.

years, to decide whether to sell village property that had passed to the fisc (as we have seen, the purchasers were peasants or monasteries), to rent it out, or to give it away, often to the powerful. Here is another extract from the *Fiscal Treatise*.

Isolated farms and separately constituted estates (*idiostata*) have been formed thus: a region was abandoned, possibly following an attack by barbarians, or on account of another disaster; the remaining neighbors are likely to leave too because they are forced to pay the tax on the abandoned land; when an assessor arrives, sent by the emperor, he will, after making an inquiry, exempt the tax owed on the abandoned fiscal units, either in totality or in part. If the heirs return within a delay of thirty years, the exemption will be cancelled. If they do not return and the thirty years have expired, a second assessor is sent, who alters the previous exemption and records it as *klasma*. Once effected, the assessor, whether he be the one who established the *klasma* or another after him, separates the land that pertains to these fiscal units that have become klasmatic and forms a whole, establishes its boundaries, and records it in the office register. He also constitutes a separate entity from what remains in the village territory and also registers its boundaries. After which, the separated land that has become klasmatic may be sold, given away, rented on a short-term basis or with a lease, or allotted to an office and thus become repopulated and improved. . . . After thirty years have passed, if the heirs have not turned up, the exemption is turned into *klasma* by another assessor, for the heirs can no longer be expected to return. . . . Indeed, it is after thirty years that the exemption is changed into a *klasma*, when the fisc is entitled to do what it wants with the klasmatic land. Indeed, if it is said that the emperor gives someone or other land taken from land that has been found to be klasmatic or exempted, it is understood to be in the years that follow the thirty years.³³²

There were indeed many sales of klasmatic land in the tenth century.³³³

Nevertheless, the state did support the structure of the village for fiscal and military reasons between the seventh and ninth centuries. In the tenth century, when the emperors were threatened on many occasions by powerful Anatolian landowners, they probably had political motives for trying to defend villages against initiatives by the powerful. Their legislation was based on the right of preemption for neighbors³³⁴ and was aimed at defending small landed property and the institution of the village commune against encroachment by large landowners, whether ecclesiastical or lay. A much-quoted passage in the novel issued by Romanos I Lekapenos in 934, which tried to prevent the powerful from “introducing” themselves into communes (by acquiring their lands), stresses the ultimately political importance of these small village landholders to the state: “The number of holdings (*katoikeseis*) is shown to be linked to the

³³² *Fiscal Treatise*, 116, 119.

³³³ N. Oikonomides, “Das Verfalland im 10.–11. Jahrhundert: Verkauf und Besteuerung,” *FM* 7 (1986): 161–68.

³³⁴ Cf. Lemerle, *Agrarian History*, 85–108; Kaplan, *Les hommes et la terre*, 375–444. On the right of preemption, see E. Papagianni, “Protimesis (Preemption) in Byzantium,” *EHB* 1048–59.

abundance of food, to the payment of taxes, and to the fulfillment of military obligations, all of which would be lacking if this great number absconded.”³³⁵

Moreover, by stipulating that taxes should be paid in coin, the state was encouraging peasants to participate in the monetary economy and its circuits of exchange, a point that need not be elaborated as it is treated more fully elsewhere.³³⁶ When it was able to raise the taxes, as was the case from the beginning of the ninth century on,³³⁷ this was probably due to an increase in peasant productivity and land revenues, the result of improved security in some places.

Estates within Village Territory In the tenth century, the village territory was the theater of transformations, the result of which was to make the estate dominate the framework of agricultural production and to assist the growth of the rural economy. A possible reduction in the size of peasant holdings, together with poor harvests and insecurity, may sometimes have made villagers more vulnerable, resulting in more frequent cases of indebtedness and sales of land to larger landowners. Furthermore, village territories were farmed more comprehensively when estates were set up on them, supporting the peasants in a way that neither the village community nor the fisc could match, in spite of tax exemptions and relief. Finally, from yet another point of view, an efficiently managed estate would have allowed higher levels of dues to be collected than was possible within the context of the communal tax system. This set of facts may help us understand what happened.

As noted above, village society was not egalitarian.³³⁸ Some of the landowners had acquired vast holdings that in fact constituted small estates. In a novel of 996, Basil II instanced a layman called Philokales, a simple villager who rose to be *protovestarios*, and who gradually took over all his village and turned it into his estate.³³⁹ The same novel provides another instance of the way communal land was being transformed, this time to the church's advantage: in nearly every province, it tells us, a large number of communes were suffering from encroachment by the monasteries, sometimes to the point of disappearing, or nearly so. The origins of these little monasteries often lay in a villager's decision to found a church on his holding and become a monk. Two or three other villagers would soon join him, and when they died the local bishop would confiscate the church and self-servingly designate it a monastery, since monasteries came under his jurisdiction. He would appropriate the property or give it away, harming the villages in every instance.³⁴⁰ On other occasions, alluded to above, powerful men who had no connection with the village would introduce themselves onto its lands.

A significant example of the high stakes set on land in the tenth century is provided

³³⁵ Svoronos, *Novelles*, 85; Lemerle, *Agrarian History*, 97.

³³⁶ Treadgold, *Revival*, 38; cf. N. Oikonomides, “The Role of the Byzantine State in the Economy,” *EBH* 956–57.

³³⁷ Cf. Theophanes, 486–87.

³³⁸ About village society, see Kaplan, *Les hommes et la terre*, 219–31.

³³⁹ Svoronos, *Novelles*, 203; Lemerle, *Agrarian History*, 104–5.

³⁴⁰ Svoronos, *Novelles*, 209; Lemerle, *Agrarian History*, 112–14.

by Siderokausia, as described in a judge's act, dated 995. As we have seen, the small monastic establishment founded there in 866 had grown into an estate that belonged, first to Kolobou monastery, and then to Iveron, whereby the monastery initially contributed to the commune on the same basis as the peasants. The monastery, which disposed of considerable financial means, farmed this estate and extended it somewhat into a hitherto uncultivated area, the little coastal plain of Arsenikeia. Here it set up mills and gardens, planted orchards, and created meadows, establishing many *paroikoi* and raising great numbers of livestock, especially pigs. Some of these pursuits suggest that the "material needs" of monastic life, to which the judge alluded (ironically?) in the preamble to his act, were not the sole object of all this dynamic activity. The village inhabitants, too, were improving the territory, though they really were driven by necessity; indeed, they cleared fields at Arsenikeia, which involved them in a lengthy dispute with the monastery, as the latter's livestock trampled the villagers' sown land. This dispute was arbitrated on several occasions by judges, beginning in the middle of the century. In 995 a judge hoped to put an end to it by deciding to separate their respective properties, including both cultivated and uncultivated land. Thus he caused the *paroikoi* camp that had been set up on land belonging to the village to be destroyed by fire. At the demand of both parties, however, the judge had to include in his decision many special clauses aimed at preserving their respective interests. He ended by dividing the tax liability and the grassland rights between the monastery and village in proportion to the property owned by the two parties.³⁴¹ This judgment was favorable to villagers to the extent that he curtailed the monastery's pretensions and even made it retreat. However, though it did not formally destroy the commune's fiscal framework, it clearly altered its unity. It also shows how the monastery and the peasants disposed of unequal means when it came to engaging in land improvement.

The problems had long been insecurity, defense, and subsistence, and the village had met the needs of an undeveloped economy by adjusting to a very partial and sometimes extensive exploitation of the available space. We have just seen how this was no longer the case in the tenth century. We will now see how the village commune disappeared in many cases during the eleventh century.

The Role of the Estate Framework

Estates were endowed with personnel to manage them, and their task was to increase land revenues. From the tenth century on, they assumed the leading role that had been held until then by the villages, albeit in an economy that was henceforth orientated toward demand, with monetary exchanges taking a larger share, as Cécile Morrisson has shown.³⁴²

³⁴¹ *Iviron*, 1: no. 9.

³⁴² C. Morrisson, "Monnaie et finances dans l'empire byzantin, Xe–XIVe siècle," in *Hommes et richesses* (as above, note 1), 2:299–301. With regard to the role of money in the economy, see eadem, "Byzantine Money: Its Production and Circulation," *EHB* 924ff, 937–38.

The Growing Role of the Large Estate in the Rural Economy Although there is evidence for the existence of estates in the seventh century, their importance seems, at that time, to have been limited. J. Haldon has suggested that there was some continuity in the domanial economy after the sixth century, irrespective of whether the property belonged to state, church or the social elite. This theory must be considered, although there are no precise indications to corroborate it. As he points out, the lack of security was not general, and the ancient domanial structures may well have continued to operate in various localities. In addition, the central part of Asia Minor seems to have long been divided into large estates on which stock raising was practiced, enabling a provincial aristocracy to survive or to be reconstituted fairly early on; this aristocracy can be seen in connection with this sort of economy from the ninth century on. It may be imagined that the former senatorial, or at least curial, elite, or local chiefs, as well as army officers, had managed to keep or acquire land both legally and illegally, taking advantage of war or simply unrest. The success of these “ranch” owners may be explained by the fact that herds are easier to protect in times of danger than crops or other forms of agricultural investment.³⁴³ Whatever the case, it seems that estates in the seventh century were often small and probably few in number, compared at least with what they had been and what they were to be. This seems to have been true of the state’s domains as well.³⁴⁴

In the eighth and ninth centuries, only a few examples can be offered, which suggests that the domanial economy was developing, albeit slowly. The wealth of the secular church and the monasteries was augmented by donations, given that foundations were financed by income from lay property.³⁴⁵ Even before the end of the first iconoclastic movement, many monasteries were founded, sometimes on property belonging to families grown wealthy in the service of the state,³⁴⁶ as was the case in Bithynia with the monasteries of Theophanes in Polichnion, Kalonymos, and Agros, or the monastery of Plato and Theodore of Stoudios at Sakkoudion. Some continued prosperous, as in the case of the Agauroi monastery near Prousa, which owned five dependencies in the region in the ninth century; however, it is impossible to assess the extent of these monasteries’ landed assets.³⁴⁷ Several canons of the Second Council of Nicaea (787) are devoted to the management of the church’s landed wealth; they recall that church lands are inalienable and that bishoprics and monasteries must retain a steward; they prohibit clerical involvement in the management of lay estates and lay management of church estates, which is evidence for the existence, at least, of a domanial economy in some regions.³⁴⁸

There were various reasons, including the fiscal exemptions for church lands that

³⁴³ Haldon, *Seventh Century*, 153–72.

³⁴⁴ Kaplan, *Les hommes et la terre*, 324.

³⁴⁵ Lemerle, *Agrarian History*, 54–56; Thomas, *Private Foundations*, 117.

³⁴⁶ Thomas, *Private Foundations*, 123–24.

³⁴⁷ Cf. R. Janin, *Les églises et les monastères des grands centres byzantins* (Paris, 1975), 195–99; 177–81; 132–34.

³⁴⁸ Thomas, *Private Foundations*, 126.

were probably implemented during the time of Empress Irene, why lay people were encouraged to turn their landed property into monasteries and to use *paroikoi* to farm them.³⁴⁹ Although neither the social elite nor the state was unaware of the importance of land revenues, this did not mean that the domanial economy was already playing a significant role. It was, however, no longer negligible. With regard to the fifth “vexation” of Nikephoros I (810), Theophanes evokes the pious foundations, orphanages, hostleries, hospices, churches, and imperial monasteries, whose property was cultivated by *paroikoi*, and he tells us that some lands belonging to these establishments were confiscated to benefit the administration of imperial estates (*basilike kouratoria*), whose rise seems to date from this period. The number of pious foundations was great enough for the exemptions they enjoyed to cause a perceptible reduction in the state’s income, and the fifth “vexation” was precisely that of reestablishing the payment of the hearth tax (*kapnikon*) by *paroikoi* on church estates, who had previously been exempted.³⁵⁰

At this time, the aristocracy in the capital and provinces owned estates in Bithynia, where the landowners sometimes sojourned, as in the case of a certain lady of senatorial rank who, around 820–830, normally lived in Nicaea but sometimes resided on an estate (*chorion*) that she owned.³⁵¹

The slightly later correspondence of Ignatios of Nicaea (cf. note 23) provides a concrete picture of the church as a great landowner. It suggests that the metropolis of Nicaea had considerable revenues from land, although the tax burden was said to be unbearable. The metropolis owned olive groves that produced oil (letter 4) and arable land that was farmed indirectly, as “the church does not own a single ox.” The management was entrusted by the steward to a curator, who divided the land up among the *paroikoi* that he had settled on it. These owed the metropolis dues in kind, apparently a fixed share of the harvest (thus a *pakton*). That the wheat reserves stored in the steward’s office were considerable is suggested by the size of the claims made by the authorities of the Opsikion: on two occasions in the same year, 6 modioi (of wheat) for each member of each family of clerics (letters 1–3, 7–8).

The progress of monastic foundations was scarcely impeded by the second iconoclastic movement. What subsequently emerges is the growing role of the estates in the economy and the “circulation” of properties or their revenues: between the state and the lay people to whom the emperor presented gifts: between lay people and monasteries, with the former turning their estates into pious foundations in order to guarantee their status; and also between church and state, when Basil I tried to recover the management and revenues of ecclesiastic property.³⁵²

One example illustrates the circumstances in which monastic estates were developed between the end of the ninth and the end of the tenth century. We saw how John Kolobos founded a hermitage in Siderokausia in 866; he had received significant quan-

³⁴⁹ Ibid., 129.

³⁵⁰ Theophanes, 486–87; Thomas, *Private Foundations*, 128–29.

³⁵¹ *La vie merveilleuse de saint Pierre d’Atroa*, ed. V. Laurent (Brussels, 1956), chap. 51.

³⁵² Thomas, *Private Foundations*, 130–39.

tities of deserted land at Hierissos from Basil I that had probably been recently fortified, and he founded a monastery there, dedicated to John Prodhromos, shortly after 833. The imperial monastery of Kolobou secured by fraudulent means an act of Leo VI that granted it ownership not only of almost all Athos, but also of property belonging to the communes of Siderokausia, Chlomoutza, "and others," as well as of four (small?) religious houses. Although this act was annulled in 908 at the request of the monks of Athos,³⁵³ the monastery continued rich and powerful. It improved its lands, as we have seen, and was set above three big monasteries which, with their frequently considerable wealth and their *paroikoi*, became its *metochia*. Probably the oldest of these was the monastery of Abbakoum in Kassandra; the monastery of Leontia in Thessalonike had been founded by relatives of Constantine VII and, during the same period, that of Polygyros by the *protospatharios* Demetrios Pteleotes. Kolobou acquired further property of monastic origin. In 979/980, when, in exchange for two (imperial?) monasteries, one in Constantinople and the other in Trebizond, Kolobou was given by Basil II to the Georgian general and monk Tornikios, its property amounted to more than 10,000 ha (80,000 modioi). The monastery that Tornikios founded at Athos, soon known as "of the Iberians" or Iveron, was entitled to install at least 200 *paroikoi* on its estates (formerly those of Kolobou).³⁵⁴ It should be noted that Basil II gave Tornikios no lands that were not already monastic, no doubt because he did not want to distribute fisc property.

As the novels of the Macedonian emperors testify, the tenth century was the period when the number of large landed properties increased decisively. Once security had returned to a province, now protected by the army and administered on the basis of a reconstituted network of *kastro*, the powerful were incited by hopes of more regular and higher agricultural revenues to take action against the interests of the village communes and their members. These initiatives often did succeed, in spite of the laws against them. Indeed, it was not only the lay and monastic estates that grew in size and number. Metropolitans, archbishops, and bishops, as well as those responsible for pious or imperial foundations, number among the powerful who are denounced in the novel of Romanos I for introducing themselves within villages and increasing their possessions by means of purchases, donations, wills, or any other way.³⁵⁵

The state itself would exploit estates, a process that is easier to detect from the ninth century on, due especially to the precedence lists that reveal the organization of central services responsible for the management of these estates, and to the many seals that belonged to local persons in charge. Some of these estates have been discussed above in relation to their role as stockbreeders supplying the army. The income from other estates was attributed to the post (*dromos*) and to a variety of public establishments of a charitable nature (*euageis oikoi*). A number of these were administered by curators and by *episkeptitai*. It will be noted that the state in the tenth century retained lands reconquered from the Arabs for its own profit and use. Thus, after 934, land that had

³⁵³ *Prôtaton*, nos. 1 and 2. Cf. above, 258.

³⁵⁴ *Iviron*, 1:25–32; (for the equivalence between the modios and the hectare, see note 51).

³⁵⁵ Svoronos, *Novelles*, 84.

been deserted by the Arabs of Melitene formed a *curatorium* that brought the fisc important revenues. Other *curatoria* were subsequently instituted at Tarsos, Artach, and in Antioch itself.³⁵⁶

In the eleventh century the state played a determining role in speeding up a process that it had not initiated and had tried to stop during the tenth century. The effect of this policy was to substitute large estates for village property almost everywhere, albeit without affecting the primacy of the smallholding. In this respect, the reader is referred to N. Oikonomides' study of the evolution of the state's fiscal policy in this volume; here I stress only those points that pertain to the present topic. The level of security had never been as high as in Basil II's vast empire. The power of the state, the strengthened concept of dynasty, and the changes in the recruitment methods of the army all meant that from then on it made less sense to defend the rural commune. Furthermore, the fiscal value of the commune had also diminished, since the state drew greater revenues from estate lands than from its taxes. The experience of the palace services had made them aware of this since the ninth century. Oikonomides emphasizes that, from the beginning of the eleventh century on, the state no longer sought to sell deserted land but to keep it and organize it into estates cultivated by *paroikoi*.³⁵⁷ Furthermore, the state attempted to extend fisc property in the eleventh century; although deserted land could in principle be made into *klasma* only after thirty years, in fact this rule was not observed, and arranged desertions can be detected that allowed the law to be bypassed and the whole of a commune to be turned more quickly into an estate.³⁵⁸

The state's interest in land was made explicit by Alexios I Komnenos' fiscal policy at the end of the eleventh century. The fisc was well aware of the concept whereby the sum of a landowner's land tax revenues made it possible to check whether he had usurped any land;³⁵⁹ once made a rule and combined with an increase in tax rates, this concept allowed the fisc to proceed to considerable expropriations of land in favor of the state. Indeed, these practices may have been very old.³⁶⁰ From 1089, however, they were applied on a grand scale by Alexios I, clearly with the purpose of increasing the quantity of fisc land, meaning the state's wealth. In this way, the Iveron monastery had to cede more than 75,000 modioi of land to the fisc, and many other examples could be cited.³⁶¹

Thus the land tax had become less important to the state than its revenues from land farmed by *paroikoi* on its own estates. Though emperors were still specifying, even

³⁵⁶ Skylitzes, 224–225; Oikonomides, *Listes*, 356; Kaplan, *Les hommes et la terre*, 316–17.

³⁵⁷ N. Oikonomides, "L'évolution de l'organisation administrative de l'Empire byzantin au XIe siècle (1025–1118)," *TM* 6 (1976): 136–37.

³⁵⁸ Kaplan, *Les hommes et la terre*, 402–3; N. Oikonomides, "La fiscalité byzantine et la communauté villageoise au XIe siècle," in *Septième Congrès international d'études du sud-est européen: Rapports* (Athens, 1994), 89–102.

³⁵⁹ This idea underlies several passages in the *Fiscal Treatise*.

³⁶⁰ N. Oikonomides, "De l'impôt de distribution à l'impôt de quotité, à propos du premier cadastre byzantin (7e–9e siècle)," *ZRVI* 26 (1987): 17.

³⁶¹ *Iviron*, 2:28–31; A. Harvey, "The Land and Taxation in the Reign of Alexios I Komnenos: The Evidence of Theophylakt of Ochrid," *REB* 51 (1993): 139–53.

in the twelfth century, the number of *paroikoi* that a large landowner was entitled to install on his properties, this disposition did not necessarily signal a shortage of people. It could also reveal the state's desire to scotch all competition on the labor market and to retain a rural population on its own estates, at a time when people were still very mobile. Though our information about the transformation of villages into estates is derived from normative texts and a few fiscal documents that reflect administrative concerns, the underlying logic was mainly economic. While the question of ownership was still important, the state was primarily concerned about the management of the land and the allocation of its revenues.

In the Athos archives, references to imperial estates (*basilika proasteia*) appear in the mid-eleventh century.³⁶² Villages that are known to have possessed commune status in the tenth century became estates of the fisc, after which they might be ceded to a monastery or lay person, as was the case with Obelos, Dobrobikeia, Radolibos, Semalton, and Zidomista in the region of Pangaion alone.³⁶³ Further examples could be cited, but the total number of surviving documents is not sufficient to prove that this transformation of the structure of land ownership was general. This does, however, seem to have been the case. In Macedonia, the last reference to a rural commune dates from the mid-eleventh century.³⁶⁴ Twelfth-century documents are particularly rare in the Athonite archives, and it is difficult to reconstruct the situation at the time. In any case, it is certain that, by the beginning of the fourteenth century, the Macedonian countryside was made up of an almost unbroken network of estates that had replaced the former network of communes.

The boundaries of these estates sometimes corresponded to those of village territories, but this was not the rule. More often than not, the estates were not as extensive, showing that the process of turning village territories into estates was probably achieved in stages, according to the procedures described in the *Fiscal Treatise* or in the *Vademecum* edited by J. Karayannopoulos.³⁶⁵ This is also suggested by some documents.³⁶⁶ The soil appropriation maps that can be drawn from the delineations of property at this time in western Chalkidike show that large landowners, the monasteries at any rate, had sought to acquire neighboring estates, no doubt to make it easier to manage their lands, thus almost constituting principalities.³⁶⁷ Given that the Latin occupation after 1204 and the period of the first Palaeologan emperors do not seem to have introduced any great changes in the rules of landownership, it is likely that estates already prevailed over smallholdings by the end of the twelfth century. When Niketas

³⁶² For instance, *Iviron*, 1: no. 29, in 1047 (Choudina, Eunouchou, Melintziani, Rousiou, at the limits of the estates of Iveron).

³⁶³ *Iviron*, 1: no. 30; 2: nos. 48 and 51.

³⁶⁴ Oikonomides, "Fiscalité," 101.

³⁶⁵ J. Karayannopoulos, "Fragmente aus dem Vademecum eines byzantinischen Finanzbeamten," *Polychronion: Festschrift Franz Dölger zum 75. Geburtstag* (Heidelberg, 1966), 318–34.

³⁶⁶ For instance, at the beginning of the 11th century, the village of Obelos in the Pangaion was divided into two estates, one of which belonged to the son-in-law of a protospatharios; cf. *Iviron*, 1: no. 30.

³⁶⁷ Cf. Lefort, *Chalcidique occidentale*, maps in *fine*.

Choniates discussed the *pronoia* system for financing the army under Manuel I Komnenos, he presented the situation of peasants, prior to the time when they had to pay fisc revenues to *pronoia* soldiers, in the following terms: “formerly their only master (*despotes*) was the fisc.” He appears to have been alluding to *paroikoi* on the estates of the fisc rather than to the members of a commune, which suggests that the domanial structure was already predominant at that time.³⁶⁸

This evolution is clear enough not to require further illustration. P. Magdalino stresses that there is little information about smallholdings in the twelfth century and that the legislation defending them remained viable under Manuel I Komnenos.³⁶⁹ At the same time, he presents an impressive picture of large landed property in this period: almost the whole littoral, from Constantinople to central Greece and the islands, belonged, in the twelfth century, to big landowners, often from Constantinople, the greatest of whom was the state.³⁷⁰ The geographical distribution of these large estates was unequal. Hendy has sought to establish the geographical entrenchment of the big landowners; in the eleventh-century Balkans, three-quarters of them owned property in Macedonia, the Peloponnese, Thrace, and Thessaly; in Asia Minor prior to the Seljuk conquest, three-fifths of them were originally from the central plateau or from Paphlagonia.³⁷¹ These details provide important clues about the regions in which the process outlined above first began. However, from the eleventh century on, its most striking aspect is the omnipresence of the domanial structure.

Great Landowners Landowners and holders of estates formed a world radically different from that of the peasants, but that contained its own contrasts. Many of the great landowners belonged to the lower ranks of the provincial aristocracy, and their possessions were modest. The same applied to many monasteries and bishoprics. At the other extreme were the very great landowners, both institutions and private persons, who were masters of numerous estates, either situated in a single region or dispersed throughout the empire. Every kind of intermediate situation also existed. Furthermore, some of the powerful drew revenues from properties they did not own, as in the case of the *charistikarioi* (prebendaries) who were put in charge of monasteries. In the same way, *pronoia* soldiers in the twelfth century received dues or taxes owed to the state by *paroikoi* on estates of the fisc. It is only seldom that information about the composition and extent of a person's landed wealth is known, so this is generally estimated from the number of estates that made it up. The cases of Kolobou/Iveron, referred to above, and of Lavra, which held ca. 50,000 modioi in Macedonia at the end of the eleventh and the beginning of the twelfth century, are exceptionally well documented.³⁷² Each of these estates formed an *oikos*, a term that, like *domus*, dated from

³⁶⁸ *Nicetae Choniatae Historia*, ed. J. L. van Dieten (Berlin–New York, 1975), 208 (hereafter Choniates).

³⁶⁹ Magdalino, *Manuel*, 160–61.

³⁷⁰ *Ibid.*, 160–71.

³⁷¹ Hendy, *Studies*, 85, 100.

³⁷² Cf. *Lavra*, 1:74.

the Roman period and contained two connotations: that of a vast holding and that of the management of various landed properties belonging to a single owner.³⁷³

While it is possible to stress the contrast between middling and very great landowners, it is not so easy to assess its economic significance. In every instance, the domanial economy was directed toward providing a subsistence for the people in the great landowner's entourage, his servants and clients, who could, as a body, be very numerous, and toward securing an income from the sale of produce. This, as we recall, was supplied primarily by the *paroikoi* in the form of dues paid in kind, and to a lesser extent through the direct exploitation of the estate lands. Commercialization played a part in the redistribution, which influenced the dynamism of the domanial economy. This part depended on a number of factors, including the proximity of the market, its size, and the structure of the trading network, all of which evolved during our period.³⁷⁴ In the absence of precise documentation, one can only note that very great landowners had more facilities than others available to them for selling their produce. On the other hand, provincial squires were able to keep a close eye on the use of their land. Magdalino suggests, with regard to the twelfth century, that the concentration of many provincial estates into large Constantinople-based and often state-owned *oikoi* constituted a weakness for the empire on the political level, particularly because large numbers of intermediaries were able to exploit the distance between the place of production and the capital, where a large proportion of produce was assembled, to grow rich. This distance also made it more difficult to supervise production and ended by favoring the illicit rise of local economic and political powers.³⁷⁵ In economic terms, however, insofar as Constantinople was the most important market, it may be observed that this circuit of farm produce was often the shortest and best suited to the market economy. Furthermore, estate agents were obliged to keep accounts, which served to limit fraud. The important point here is that the propensity to invest and improve, with the aim of increasing revenues and of managing the estates to best effect, does not appear to have depended on the status of the great landowners or on the size of their possessions.

Let us run quickly through the various categories of great landowners. Although their typology is important for the study of Byzantine society, it seems to have played only a minor role in the rural economy, since all the estates seem to have been farmed in the same way. The question has often been addressed, and M. Kaplan has devoted a detailed study to it.³⁷⁶ Although we have no precise data, the way property was distributed between state, church, and powerful lay people can be discerned at the end of our period. However, we should recall that the interplay of donations, conditional attributions, and confiscations, and the frequent changes to the status of land, meant that the boundaries between these three categories fluctuated and were far from clear-

³⁷³ Cf. Kaplan, *Les hommes et la terre*, 339–41.

³⁷⁴ See in this volume, A. E. Laiou, "Exchange and Trade, Seventh–Twelfth Centuries," *EHB*, passim; and, for the 14th century, eadem, "Agrarian Economy," 340–42.

³⁷⁵ Magdalino, *Manuel*, 170–71.

³⁷⁶ Kaplan, *Les hommes et la terre*, 281–373.

cut. This confusion formed part of a system of landownership that was regulated by the state.

According to Oikonomides,³⁷⁷ it could be said that the state had always been the largest landowner. We have seen how this was the case more than ever before from the eleventh century on. The property of the emperor, empress, institutions of public charity, and finally the fisc are occasionally mentioned in documents, chronicles, and literary texts. Especially well known are facts about their management at the central level by the palace services and at the local level by the administrators of estates. Occasionally the data are more precise; the eighty-five possessions of the hospital-monastery of the Pantokrator in Constantinople, founded in 1136 by Emperor John II Komnenos, are listed in the monastery's *typikon*. They included some *episkepseis* and some estates and villages in Thrace, Macedonia, and also Mytilene and Kos, just about everywhere in the empire except the stockbreeding regions.³⁷⁸ Similarly, we know by chance that the *oikos* of Mangana owned property in the Thebes region.³⁷⁹ Other examples could be provided showing how the possessions of the *euageis oikoi* were dispersed, which, in the absence of other data, serves as an indication of their importance.

While the secular and above all the regular church had not always been the second-largest landowner in the empire, it certainly became so in the course of the period under discussion. The patriarchate apparently owned extensive property, judging by the numerous staff assigned to the steward of Hagia Sophia.³⁸⁰ This property also seems to have been distributed throughout the empire, and we know at least that the patriarchate owned property in the Strymon valley prior to 1071, where it also acquired a previously imperial estate called Eunouchou, between 1047 and 1062.³⁸¹ I referred earlier to the estates of the Nicaea metropolis in the ninth century, and, through the tenth-century novels, to those belonging to the secular church in general. Their importance is not in doubt. In addition to these, the churches had other sources of income, particularly from "customs" levied from certain monasteries.³⁸² Bishops naturally did not own as many possessions as metropolitans: at the beginning of the tenth century in the Peloponnese, during a requisition referred to above, the metropolitans of Corinth and Patras each had to supply the army with four horses, and each bishop had to supply two. The little that is known about the possessions of the bishopric of Hierissos, in a well-documented region, tells the same story: its wealth was not extensive.³⁸³ Whatever the landed wealth of the secular church may have been, it was certainly exceeded by that of the monasteries. We have seen how their wealth grew significantly from the ninth century on. The monasteries' role in land management became determinant in the tenth century, whether these establishments reported to the emperor, the patriarch, or local churches, or whether they were independent (*autodes-*

³⁷⁷ Oikonomides, "Terres du fisc," 321.

³⁷⁸ P. Gautier, "Le typikon du Christ Sauveur Pantocrator," *REB* 32 (1974): 1–145; cf. 115–25.

³⁷⁹ Svoronos, "Le Cadastre de Thèbes," in *Etudes* (as above, note 1), art. 3, pp. 15–16.

³⁸⁰ Kaplan, *Les hommes et la terre*, 286–89.

³⁸¹ *Iviron*, 2: no. 40.

³⁸² Kaplan, *Les hommes et la terre*, 284.

³⁸³ D. Papachryssanthou, "Un évêché byzantin: Hiérissos en Chalcidique," *TM* 8 (1981): 383–84.

potoi), meaning dispensed from paying any dues to anyone.³⁸⁴ Furthermore, monasteries were sometimes granted a special privilege by the emperor that exempted them from paying the land tax.

Lay persons could also own very extensive property. P. Lemerle has commented on the three texts dating from the second half of the eleventh century that provide the most precise information about this, to which I have already alluded. These are Eustathios Boilas' will, which Lemerle has edited, Michael Attaleiates' *Diataxis*, and Gregory Pakourianos' *Typikon*.³⁸⁵ With regard to aristocratic wealth, which varied considerably, J.-C. Cheynet has stressed that it was mainly composed of landed property, but that inherited estates, patrimonies, were unstable, being sometimes presented by the emperor and often confiscated. He recalls how Eustathios Maleinos in Asia Minor had been able to receive and feed Emperor Basil II and his army of at least 20,000 men on their way to fight the Arabs around the year 1000. During the same period in the same region, the possessions of the Phokades, the Skleroi, and the Komnenoi were no less extensive.³⁸⁶ However, by the end of the eleventh century, the great private fortunes in the Balkans often appear to have been less important than they had been on the Anatolian plateau. The case of Gregory Pakourianos, whose possessions had been given him by the emperor, amounting to twelve villages, eleven estates, six fortifications, and six monasteries distributed over three regions in Bulgaria, Thrace, and Macedonia, is possibly exceptional; we know that he granted them to the monastery he founded in Petritzos/Bačkov. The impression gained from the Athonite archives is that estates held by lay persons were less numerous than monastic estates, though the sources may, in view of the nature of the collection, be giving a misleading impression.³⁸⁷

One could make this classification of the various great landowner types more specific by referring to many other examples and particular cases. However, from this point of view, the essential fact is that, after the tenth century, the state and the monasteries between them shared a great part of the empire's lands. This process was not achieved without conflict, but it proved lasting. The state, however, had long been keeping a "pool" of estates that were constantly being recycled in order to reward its lay servants, a process described by Magdalino.³⁸⁸ Though the share held by the aristocracy varied according to political circumstances, it was still very large.

The Management of Estates

Staff The important thing, from the point of view of the rural economy, was that estates should be managed by a competent staff. Indeed, lay and ecclesiastical agents often were competent. The person who managed the estate could be its owner, but was more often an administrator. *Episkeptitai*, *pronoetai*, stewards, curators, *chartoularioi*, and

³⁸⁴ Regarding the expansion of the large independent monasteries, see Thomas, *Private Foundations*, 214–43; on monastic property, cf. in the last instance Kaplan, *Les hommes et la terre*, 294–310.

³⁸⁵ Lemerle, *Cinq études*.

³⁸⁶ J.-C. Cheynet, "Fortune et puissance de l'aristocratie (Xe–XIIe siècle)," in *Hommes et richesses* (as above, note 1) 2:199–213.

³⁸⁷ On private wealth, see Kaplan, *Les hommes et la terre*, 326–29.

³⁸⁸ Magdalino, *Manuel*, 168.

accountants (*logariastai*) comprised a numerous and often hierarchical world in the large *oikoi* or monasteries.³⁸⁹ Although these terms are not always very specific and their usage did evolve, they enable one to distinguish between general administrators (the *episkeptitai* of the imperial possessions of a theme or the stewards of metropolitans and large monasteries, for instance) and local officials (curators, agents for *metochia*, also called *metochiaroi*). Part at least of this vocabulary was applied to the agents of lay property, which was administered in the same way. All administrators were cultivated men, and the highest posts were granted to members of the civil aristocracy of the capital.³⁹⁰

The *Geoponika* paints the portrait of an ideal *epitropos* or steward: an early riser, he is affable, sociable, liberal, and sober and an example to the inhabitants of the estate, who revere rather than fear him; he succours those who lack the necessities of life, is neither grasping nor insatiable about dues (literally, revenues); he is, of course, honest, does not appropriate the revenues of his master's land, renders accounts to the latter, and obeys his orders scrupulously.³⁹¹ Similarly, by the end of the twelfth century, the *typikon* of the Virgin Kecharitomene nunnery in Constantinople that was founded by Irene Doukaina, wife of Alexios I, stipulates that the mother superior or her steward must choose, to guard over the establishment's estates, not relations or friends, but "persons who are held in high regard and have simple tastes, who indulge those who live on the estates, who do not appropriate anything belonging to the monastery, and who are experienced in agricultural work (*ta georgika*). The superior has the power to nominate them and also to change them when they are found lacking in probity."³⁹² Reading between the lines of these texts, not only can we deduce the ordinary faults of Byzantine estate agents (Fig. 2), but we can also see what their function involved and the checks they were subjected to. Their principal quality was probably that of being present on the estate, close to the land and the rural population. Although we have no precise information, it is clear that they were the ones responsible for implementing investments of a productive nature and for erecting domanial fortifications on plains and hilltops. Visible from far off, these served as landmarks and as symbols of "seigneurial" authority in the landscape, and they protected the people and their movable goods in times of danger. By the eleventh century, these fortifications had taken over from refuges that lay hidden in the mountains.³⁹³ We saw above how agents could supply *aktemones* with the oxen they needed for plowing, and it is conceivable that they advanced seed grain to the *paroikoi* when the harvest failed; it would have

³⁸⁹ Cf. *ODB*, s.vv. "Episkeptites," "Kourator," "Pronoetes," "Oikonomos."

³⁹⁰ Most of the preceding comments have been taken from J.-C. Cheynet, "Episkeptitai et autres gestionnaires des biens publics," *Studies in Byzantine Sigillography* 7 (2002): 000.

³⁹¹ *Geoponika*, 2.44.

³⁹² P. Gautier, "Le typikon de la Théotokos Kécharitôménè," *REB* 43 (1985): 79; similarly, the administrator of the estates belonging to Attaleiates had to be a man of integrity: Gautier, "Diataxis de Michel Attaliate," 53.

³⁹³ The six *kastra* erected by Gregory Pakourianos on his estates have been mentioned above; the *kastellion* that was built, "so they say," by the monks of Iviron at Libyzasda in eastern Chalkidike is mentioned in a document of 1104; a description of the tower of the *metochion* of Bolbos is found in the same document: *Iviron*, 2: no. 52).

been in their interest, or rather, their master's. In some respects, the domain agent played the role previously held by the commune in more troubled times, but with greater means and power at his disposal and a different objective. It was no longer (for the peasants) a matter of surviving while paying taxes, but (for the master of the estate) one of securing a large income.

Domanial Accounting At the beginning of the twelfth century, the function of agents was summed up in an ironic but realistic way by Michael Italikos in a letter to Irene Doukaina. According to him, *pronoetai* and accountants were poor philosophers, ignorant even of geometry, who knew only how to increase revenues (*prosodoi*), reduce expenses (*dapanai*), and make profits (*to ploutein*). These accusations were drafted by a well-read man, who stressed the link between landownership and the desire for greater wealth. While they remind us that the nomisma or its equivalent in wheat was henceforth to be the measure of all things, they also highlight the notion of accounting.³⁹⁴ Several documents suggest that agents were forced to keep accounts that were periodically balanced by the owner.³⁹⁵ Italikos' text suggests treasury accounting at the estate level (revenue – farming expenses = the contents of the local cash chest), rather than actual management, since it deals only with reductions in expenses and thus rules out any possibility of the agent's engaging in improvements. However, farming expenses could include small-scale investment, and agents probably enjoyed a certain latitude in this respect. Expensive improvements required a decision by the master of the estate; we know, at any rate, that funds invested in the land were taken out of the net income derived from the operation of all the estates that an owner possessed. This is what the *typikon* of Pakourianos shows, as we shall see.

The keeping of estate accounts features in the *praktikon* of transfer that was established in 1073 for the *megas domestikos* Andronikos Doukas, to whom the emperor had granted the property of the *episkepsis* of Alopekai near Miletos. This document mentions, according to the register of the *episkepsis*' accountant (*katastichon tou logariazontos ten episkepsin*), the revenue in coin (*eisodos logarike*) from each estate, totaling 307 nomismata, and the farming expenses (*topike exodos*), 7 nomismata, giving a net income of 300 nomismata.³⁹⁶

Very few of the many documents produced by this accounting work have been preserved.³⁹⁷ The most remarkable accounts are probably the ones produced by the Georgian steward at Radolibos and mentioned above (they can be dated from the first decade of the twelfth century). They comprise detailed lists of dues in wheat and barley paid by each *paroikos* on the estate as required by the *pakton* and *zeugologion*. In a special entry, the steward added up all the modioi of wheat received (625; some *paroikoi* had

³⁹⁴ Michel Italikos, *Lettres et discours*, ed. P. Gautier (Paris, 1972), 95.

³⁹⁵ See, for instance, Gautier, "Typikon de la Théotokos Kécharitôménè," 79.

³⁹⁶ *Patmos*, 2: no. 50.

³⁹⁷ See, for instance, the accounts (of the governor of the *kastron* of Mytilene?) published by P. Schreiner, *Texte zur spätbyzantinischen Finanz- und Wirtschaftsgeschichte in Handschriften der Biblioteca Vaticana* (Vatican City, 1991), no. 49, p. 246.

paid their dues in coin); he deducted, on the one hand, the amount of wheat used or disposed of on the spot (especially the 150 modioi of seed wheat mentioned above) and, on the other, the part that had been sent to Iveron (200 modioi), and he assessed the “remainder” (57 modioi).³⁹⁸ These lists and his calculations were very probably intended for the steward at Iveron, who would thus know what the *paroikoi* had contributed and would be able to check the accounts kept by the steward on the estate.

Three texts—Boilas’ will, Attaleiates’ *Diataxis*, and Pakourianos’ *Typikon*—show that these great landowners of the eleventh century were perfectly well aware of the financial income they derived from their wealth, thanks to the accounts they received. The following comments are borrowed from *Cinq études* by Lemerle, who has studied the economics of these estates in detail. Boilas set up a direct ratio (*logos*) between the value of an estate considered as capital (30 pounds of gold) and its anticipated revenue after tax (80 nomismata), or 3.7%.³⁹⁹ Attaleiates was more precise and possessed a whole set of accounts: the produce (in kind?) of each of the five estates that comprised the bulk of his foundation was to be the subject of detailed lists (*lepte apographe*)⁴⁰⁰ and to be deposited in the Rhaidestos hospice. Once the operational expenses had been deducted (there is an allusion to this), a surplus would normally remain. This surplus was to be transported to the monastery in Constantinople, a dependency of the hospice, and, once it was sold, the funds were then to be allocated. One-third was to be assigned to the foundation’s central treasury (*docheion*) and two-thirds would revert to the owner (Attaleiates’ son), who was to profit (*kerdaino*) from this at will.⁴⁰¹ Although his text does no more than allude to the way the estates of his Petritzos monastery were managed, Gregory Pakourianos too stipulates that the assistant stewards (*paroikonomoï*) render accounts twice yearly to the grand steward and remit against receipt the funds they hold. The grand steward himself had to render accounts to the *higoumenos*, and the *higoumenos* to the monks. The monastery’s revenues, minus expenses, valued by Lemerle at around 20 pounds of gold, left a surplus, in principle. This went in the first place to supply the treasury (*logarion*), which was not supposed to contain less than 10 pounds of gold “to ensure the monastery’s needs in moments of urgency,” with the rest going to buy new landed property, meaning to increase the monastery’s capital.⁴⁰²

These examples serve to show how land had indeed become capital that was supposed to produce a profit.⁴⁰³ As well as enabling owners to assess their profits, domanial accounts also allowed them to check, on the one hand, whether the *paroikoi* had indeed paid the dues for which they were liable and, on the other, whether their agents were honest. We have seen how, among their other qualities, they were also expected to have “experience of agricultural work.”

³⁹⁸ *Iviron*, 2: app. 2. These accounts do not appear to be correct, but some of the figures are hard to read.

³⁹⁹ Lemerle, *Cinq études*, 60; Oikonomides, “Terres du fisc,” 331. On land rents, cf. below, 295ff.

⁴⁰⁰ Gautier, “*Diataxis* de Michel Attaliat,” 53.

⁴⁰¹ *Ibid.*, 53–54; Lemerle, *Cinq études*, 105–11.

⁴⁰² Gautier, “*Typikon* de Grégoire Pakourianos,” 107–9; Lemerle, *Cinq études*, 188–91.

⁴⁰³ Cf. Teall, “Agricultural Tradition,” 56, with regard to the 10th-century: “Land, in short, was a capital investment designed to produce returns.”

Great Landowners and Their Interest in Agronomy Most of the following observations have been taken from the article by J. Teall, mentioned above. Great landowners of the ninth to twelfth centuries who were well read took a great interest in various ways of improving their lands and consequently, so it seems, in treatises on agronomy.⁴⁰⁴ In the first half of the ninth century, Photios dedicated a note in his *Bibliothèque* to the *Collection of Precepts on Agriculture* by Vindanios Anatolios of Beirut (4th century). After listing the sources used by Vindanios, he adds:

This book is useful, as I have observed from much experience, for the cultivation of land and countryside tasks, and is perhaps more useful than those of all the other authors who have undertaken a work of this kind. Nevertheless, this book still contains many marvelous and incredible features, full of pagan errors. The pious laborer must remove them in order to garner what is useful in the rest of the work. To my knowledge at least, all authors of agricultural treatises teach more or less the same notions on the same subjects, and there are few variants between them.⁴⁰⁵

At the time, Photios was a high-ranking official and had clearly read many treatises on agronomy. He, of course, owned land and took a keen interest in ways of improving it, having, as he wrote, firsthand experience of the “utility” of this type of literature.

With regard to the *Geoponika*, the existence of more than fifty manuscripts is clear evidence of its success in the Middle Ages. When a new edition is available, we will be better able to understand the history of this text. We need only recall that the above-mentioned *Collection* by Vindanios appears to have been one of the sources for the *Choice Pieces of Agriculture* by Cassianus Bassus (6th century), which itself seems to have formed the main part of the *Geoponika* text, as it is now known.⁴⁰⁶ The preface dedicated to Constantine VII, quoted at the beginning of this chapter, shows that at least one edition of the *Geoponika* was produced in the tenth century. The composition of the collection, which skims rapidly over cereal culture and dwells at length on vines and wine, orchards, gardens, including pleasure gardens, and livestock, meaning those activities that could come under direct estate management, shows that it was designed for an aristocratic public. Indeed, some passages suggest that this may have been a Constantinopolitan public in particular, judging by the *mirabilia* that adorn it, of which Photios disapproved in Vindanios’ work because of their pagan connotations, together with references to certain quite prodigious agronomic innovations and to everything, in the *Geoponika*, that sought to combine the useful with the agreeable, in a way that flattered the curiosity and vanity of the aristocracy.⁴⁰⁷

Psellos’ *Peri Georgikon* is a slim pamphlet that reiterates advice in the *Geoponika* on the cultivation of cereals and also exemplifies the interest that well-read people took in treatises on agronomy.⁴⁰⁸ We also know that Michael Choniates, the metropolitan of

⁴⁰⁴ Teall, “Agricultural Tradition,” 42–44; idem, “Grain Supply,” 130; Harvey, *Economic Expansion*, 145.

⁴⁰⁵ Photius, *Bibliothèque*, ed. R. Henry (Paris, 1960), 2: no. 163, pp. 134–35.

⁴⁰⁶ P. Lemerle, *Le premier humanisme byzantin* (Paris, 1971), 288–92; Teall, “Agricultural Tradition,” 40.

⁴⁰⁷ Teall, “Agricultural Tradition,” 42–43.

⁴⁰⁸ Boissonade, *Anecdota graeca*, 1:242–47.

Athens, asked the patriarch to send him a book on agronomy, for he knew that there were many such books in the patriarchate and he was unfortunately obliged to take an interest even in agriculture.⁴⁰⁹ So he too hoped to profit from such reading.

Furthermore, the taste exhibited by the aristocracy for improving their estates, even for creating real parks (in the case of emperors, at least), does occasionally appear to have been inspired by the *Geoponika*. According to Psellos, Constantine IX Monomachos shifted soil in order to lay lawns, plant groves of trees, and move vines and mature fruit trees; the church of St. George of the Mangana in Constantinople was surrounded by large meadows covered with flowers, traversed by canals, dotted with basins holding water and groves of trees, set on little mounds or spread along the hillsides. In the manner of God the Creator, the emperor had his every fancy brought into being within the space of one day.⁴¹⁰

Though on a smaller scale, the advice given by Kekaumenos to his son on estate management was based on the same aristocratic notion of land development (bearing in mind that there is nothing about mills in the *Geoponika*):

Have some *autourgia* made, that is, mills and workshops, some gardens, and all that will provide you with fruit every year, either by farming out or by sharecropping. Plant all sorts of trees and reeds, which will bring you a yield every year without pain; this way you will be free of worry. Have beasts, draft oxen, pigs, sheep, and everything that grows and multiplies by itself every year: this is how you will secure abundance for your table and pleasure in all things.⁴¹¹

This was, by and large, the program effected in the tenth century by the Kolobou monastery in Arsenikeia (see above, 277–78), by Athanasios of Lavra on Mount Athos,⁴¹² then by Boilas in eastern Anatolia. Note too that Psellos, who had received the monastery of Medikion in Bithynia as a *charistike*, knew that if he purchased oxen, procured cattle, planted vines, changed the course of rivers, and supplied water, in short, if he moved “earth and sea for this property,” he would secure high revenues in wheat, barley, and oil.⁴¹³

It is clear that agronomy was at that time considered by the aristocracy to be an extremely useful kind of knowledge. Manuals about agronomy were presumably available to every aristocrat and provided, if not the sort of advice needed by cultivators, at least an example to be followed. They also helped the master of the estate express his requirements, as determined by his way of life and his desire for greater wealth, to his agents.

The estate agents were the people who responded to such requirements. Being both accountants and, of necessity, agronomists, prompt to claim dues but also probably

⁴⁰⁹ Lambros, *Michael Akominatou*, 2:35.

⁴¹⁰ Michael Psellos, *Chronographie*, ed. E. Renauld (Paris, 1967), 56–57, 62–63. Cf. *Geoponika*, 2.8.1: “it is a good thing to have an abundance of natural forest on the estate. If there is none, it is not difficult to plant groves”; on pleasure gardens, see *Geoponika*, 10.1.1.

⁴¹¹ Kekaumenos, *Strategikon*, no. 88, p. 36; on the concept of *autourgion*, see Laiou, “Agrarian Economy,” 351ff.

⁴¹² Kaplan, *Les hommes et la terre*, 303.

⁴¹³ Sathas, *MB* 5: no. 29, pp. 263–65.

inclined to help the peasants, they implemented the expansion of the rural economy. Both the spread of an accountancy culture and the renaissance of an agronomic culture, beyond the purlieus of the state offices, belong to the period under consideration.

Forms of Development

Although sometimes found wanting in dynamism, the great landowners did carry out many improvements (plantations, various constructions, including fortifications and mills);⁴¹⁴ as we have just seen, entrepreneurial activity formed part of their culture and they had the means to indulge in it. For their part, the peasants, some of them at least, probably also carried out improvements, although their individual means were limited. However, they were able to form associations, with each other or with a great landowner.

Improvements meant spending money on materials and above all, in the case of the great landowners, paying workers when labor dues were not sufficient for the task; the rates are occasionally known.⁴¹⁵ Within the context of peasant holdings, the time and labor that could be spared for improvements were limited, but they did have the advantage of not being included in accounts.

The Distribution of Land Revenues

Scholars have argued that the peasants' capacity for investment was practically nil, by demonstrating how they only just managed to make ends meet on their holdings.⁴¹⁶ While this was certainly true for some peasants, it did not apply to all. Data relating to cereal cultivation allow us to estimate how income from the land was divided between the fisc, the farmers, and the great landowners.

Peasant Revenues According to the fisc, the possible taxes on the anticipated yield depended on the fertility of the soil. Three sorts of soil were distinguished, two of which were arable (the third corresponded to pasturelands). "First-quality land" paid twice as much tax as second-quality land.⁴¹⁷ Furthermore, because the various parts of the empire were not all equally fertile, the fisc distinguished between three large geographical areas, within which measurement procedures varied. This also allowed it to adjust the rates of the land tax while keeping to general rules of taxation. Ac-

⁴¹⁴ Some of the buildings belonging to the *oikoproasteion* of Baris were in a poor state in 1073, which does not suggest a very active kind of management. Conversely, at the end of the 12th century, the *higoumenos* Paul of Iviron restored the monastery and its *metochia* and built a mill at Bolbos; cf. *Iviron*, 2:10–11. On domanial fortifications, see above note 393.

⁴¹⁵ *Géométries*, § 28.

⁴¹⁶ Cf. Svoronos, "Structures économiques," 57–60, esp. 60: "the revenue of an average peasant was in most cases scarcely sufficient to ensure his subsistence"; Kaplan, *Les hommes et la terre*, 500–520, esp. 506: "this subsistence agriculture provided a very meagre surplus of between 1/4 and 2 nomismata, at most."

⁴¹⁷ First-quality land corresponded, on the one hand, to very valuable parcels, meadows, or gardens and, on the other hand, to the best arable land: *Géométries*, 252; cases of first-quality arable land can be found in Chalkidike at the beginning of the 12th century in *Lavra*, 1: no. 56.

cording to a tax instruction dating from either the tenth or the eleventh century, the most fertile regions were southwestern Anatolia, followed by the Balkans, and finally by the Anatolian plateau: "Throughout the east, the *schoinion* makes 12 *orgyiai*, but in the theme of Thrakesion and that of Cibyrraeot it makes 10 *orgyiai*, on account of the fertility of the soil. The same thing is done in the west, meaning that measuring is done there with the *schoinion* of ten *orgyiai*, but one *schoinion* in ten is removed and the reckoning is done thus."⁴¹⁸

Reducing the perimeter of the plot by a tenth or using a longer surveying tape were ways of limiting the taxable area and thus the land tax. It may be deduced from this text, and the calculations it enables us to make, that the taxpaying capacity of agriculturists in the west was considered inferior to the southwestern parts of Asia Minor by a factor of 19%, and that of the Anatolian plateau (the east) by a factor of 31%.

The fisc also took the diversity of holdings into account, since they could be primarily cereal producing, pastoral, or wine producing. Over and above the land tax, which was proportional to the amount of land held and its quality, the fisc also specified personal taxes tied to the available workforce as well as rights of pasturage and other rights, especially on wine production.

Real life was even more varied than anticipated by fisc instructions, surely one of the reasons why these last include an exception clause for "the custom of the place."⁴¹⁹ For instance, the distinction between two qualities of arable land is but an approximation, since the fertility of the soil could vary imperceptibly in any given place, depending on a whole series of factors. Furthermore, peasants might own fields or plots that rendered high yields, and then take on other land as tenants or sharecroppers, thus giving rise to very complex calculations.

The nature of this complexity is closed to us. Furthermore, the documentary evidence that allows us to estimate peasant revenues is scarce and subject to interpretation. To my knowledge, there are only two documented examples in the period under consideration: those relating to the *paroikoi* of Baris near Miletos at the end of the eleventh century and those of Radolibos in Macedonia at the beginning of the twelfth. Prior to presenting these two real cases and recalling the little we know about certain sharecropping contracts, I shall, as other scholars have done, reconstruct the accounts of a theoretical peasant holding that concentrated on growing cereals, or rather, reconstruct the results of its cereal cultivation. The exercise is useful, if only in order to stress the multiplicity of parameters that must be taken into account and to help in commenting on the documents relating to Baris and Radolibos.

Let us imagine the theoretical case of a *zeugaratos* (thus a well-off peasant) who either owned all his fields or rented them as a tenant. I begin by presenting the elements that enter into the calculation: some of these follow pointers contained in the fisc instruction referred to above, and others are hypothetical.

⁴¹⁸ *Géométries*, § 51. In other texts, *apodekatismos* is justified by the irregular shape of estates or by the existence within them of unproductive stretches of land; *ibid.*, p. 253.

⁴¹⁹ *Ibid.*, § 54. The "custom of the place" could also correspond to a privilege, or what was perceived as such.

On one farm, the area of arable land was in principle adjusted to the workforce, as demonstrated for instance by the words *zeugotopion* and *boidotopion*. It also varied according to the type of farm and demographic pressure. Taking as a basis the previous remarks (p. 241–42) relating to the area of tenures, we allow our *zeugaratos* 80 modioi of arable land.⁴²⁰ Let us palliate the rigid nature of tax categories by making his holding consist of half first-quality and half second-quality land. We assume the existence of catch crops on the fallow land and suppose that $\frac{5}{8}$ of the area was cultivated every year (according to Kondov; see above, 254). If we estimate a yield of 1:4 for the second-quality land and of 1:5.6 for the first-quality land, it follows that the cereal yield for this farm was 1:4.8.

The amount of seed needed for this farm can be worked out, because we know that one modios thalassios of grain was in principle sown on one modios of land.⁴²¹ We will follow M. Kaplan⁴²² in setting farming expenses (renewing the plow team and tools) at the equivalent of 12 modioi of wheat in the case of a *zeugaratos*, and we assume, on the basis of *Patmos*, II: no. 50, dated 1073, that 12 modioi of wheat were worth one nomisma.⁴²³

Theoretical tax levies are well known for the eleventh century (cf. N. Oikonomides, “The Role of the Byzantine State in the Economy,” in this volume). As we have seen, in the case of a landowner, they comprised the land tax (in principle $\frac{1}{24}$ of the land value, or $\frac{1}{24}$ nomisma per modios for first-quality land, $\frac{1}{48}$ for second-quality land), associated taxes (ca. 25% of the land tax), personal taxes (1 nomisma for a holding that comprised a plow team), and extraordinary charges, valued by N. Oikonomides at 25% of the total tax burden. Because extraordinary charges could consist of services and because they bore on the whole of the holding and not simply on the cereal-growing part, we will consider half of these charges to bear on the cereal crop. For his part, the farmer owed the state personal taxes and extraordinary charges, and the landowner rent; it may be recalled that this was in principle twice the land tax.⁴²⁴

Finally, we estimate the composition of our hearth at 4.3 persons, going by fourteenth-century hearth records and assuming a smaller demographic pressure in

⁴²⁰ This area is not very different from that allowed by Kaplan as typical of the holding of a *zeugaratos*: 100 modioi (*Les hommes et la terre*, 505), which, according to this author, corresponded to that of an average peasant; it is far smaller than the average holding proposed by Svoronos: 175 modioi (“Structures économiques,” 59).

⁴²¹ *Géométries*, § 13, 52 bis, 133. On the question of yields, see above, 253–55.

⁴²² Kaplan, *Les hommes et la terre*, 503.

⁴²³ On the price of wheat, see C. Morrisson and J.-C. Cheynet, “Prices and Wages in the Byzantine World,” *EHB*, table 5.

⁴²⁴ *Farmer’s Law*, § 19; *Fiscal Treatise*, 123; *Géométries*, § 54; Oikonomides, “Terres du fisc,” 326–28: Oikonomides relies principally on *Patmos*, 2: no. 50 (cf. below) and envisages a rent that was 20% higher; cf. Oikonomides, *Fiscalité et exemption fiscale à Byzance, IXe–XIe s.* (Athens, 1996), 125–27. In fact, tenancy agreements tended to vary and the rent could amount to less than that: cf., for instance, *Iviron*, 1:107. Cf. also I. M. Konidares, *Tò δίκαιον τῆς μοναστηριακῆς περιουσίας ἀπὸ τοῦ 9ου μέχρι καὶ τοῦ 12ου αἰῶνος* (Athens, 1979), and *ODB*, s.v. “Land lease.” In principle, the *pakton* amounted to twice as much as the land tax, and thus depended on the quality of the land. It was thus half as much on second-quality land as on first-quality land.

the eleventh century. We surmise that each person would have consumed 15.5 modioi thalassioi of wheat per year.⁴²⁵

It is clear that our model is too hypothetical for the following calculations to have more than heuristic value. Table 1 summarizes the features of this theoretical holding and shows the items that allow us to ascertain the results, in the case of both a farmer and a landowner.⁴²⁶

The rate of payments (taxes and possibly rent, compared to production) varied according to the quality of the land; according to our calculations (using the above items), the variation was between 25% (for first-quality land) and 21% (for second-quality land) in the case of a landowning farmer and, in the case of a tenant farmer, between 36% and 28%. In every case, the theoretical tax levies would have been high,⁴²⁷ higher still in the event of lower yields. However, the texts that we rely on are probably recording a fiscal demand of an ideal nature, and we would be entitled to consider the levies listed above as maximum rates, rather than average. Note, too, that dues were in principle higher for tenants than for landowners. Perhaps this was the price of protection by a powerful lord, which would explain why small landowners preferred to become a great landowner's *paroikoi*.

For landowning and tenant farmers, the yield ratios listed above (1:4.8) would in any case have left them with a surplus, allowing us to suppose that *zeugaratoi* were in a position to engage in improvements. On the other hand, our calculations suggest that, should the levies have been set at maximum rates, the surplus accruing to a tenant or peasant proprietor owning only one ox would have been practically nil, mainly because the weight of consumption would have been higher in this case as compared with the means of cultivation. However, it must be assumed that some *boidatoi* and many *aktemones* had other sources of revenue, in addition to that from their cereal crops.

Revenues of Great Landowners In general, the revenues of great landowners (apart from the fisc and owners of privileged properties) consisted principally of the sum of dues (in coin or in kind) supplied by their tenants, minus the land tax, associated taxes, and administration costs.⁴²⁸ Table 2 is based on our previous hypotheses and lists the

⁴²⁵ Lefort, "Radolibos," 223: 54.2 modioi for 3.5 consumers, a quantity that comes close to that allowed by Kaplan (*Les hommes et la terre*, 503–5), 77 modioi for 5 persons.

⁴²⁶ Wheat quantities are expressed in terms of their value in nomismata. Values in nomismata are rounded to the nearest tenth.

⁴²⁷ A high fiscal levy of 25% has been assumed by Svoronos, "Structures économiques," 59. The fiscal exactions are apparently underestimated in Kaplan, *Les hommes et la terre*, 505, where they are set at 8% in the context of a typical holding of 100 modioi; Kaplan bases his calculations on a land tax rate of 0.01 nomisma per modios of arable land, which is corroborated by some documents (*ibid.*, 489–90). He does not take personal taxes or extraordinary charges into account.

⁴²⁸ In *Patmos*, 2: no. 50, local costs amount to 7 nomismata for an area of arable land whose value we estimate at 5,391 modioi. We have used this figure as our basis for estimating administration costs, which we consider fixed for an estate of this size. Oikonomidès, "Terres du fisc," 331, sets these costs at 17% of all dues ($\frac{2}{120}$ out of $\frac{12}{120}$).

Table 1
Theoretical Results of a Farmer's Cereal Crop

Status	Landowner	Tenant	
Area of farm in modioi	80	80	
Quality of land	Half first-quality land	Half second-quality land	
Number of oxen	2	2	
Number of consumers	4.3	4.3	
Area under cultivation	$\frac{5}{8}$	$\frac{5}{8}$	
Yield	1:4.8	1:4.8	
Production	20 nomismata	20 nomismata	$= 80 \times \frac{5}{8} \times \frac{4.8}{12}$
– Input			
Seed	4.2	4.2	$= 80 \times \frac{5}{8} \times \frac{4.8}{12}$
Expenses	1	1	
= Income before dues	14.8	14.8	$= 20 - 4.2 - 1$
– Dues (taxes and/or rent)			
Land tax	2.5		$= 80 \times \frac{0.75}{24}$
Associated charges	0.6		$= \frac{2.5}{4}$
Personal taxes	1	1	
Extraordinary charges	0.5	0.5	$= (2.5 + 0.6 + 1)/8$
Rent		5	$= 2.5 \times 2$
Total paid	4.6	6.5	
= Income after payment of dues	10.2	8.3	
– Cereal consumption	5.6	5.6	$= 4.3 \times \frac{15.5}{12}$
= Surplus	4.6	2.8	
Ratio of dues to production	23%	33%	

Table 2
Theoretical Revenues of a Great Landowner

Area of arable land in modioi	4,000	
Quality of land	Half first-quality	Half second-quality
Value of land in nomismata	3,000	= 4,000 × 0.75
Production	1,000 nomismata	= 4,000 × $\frac{5}{8}$ × $\frac{4.8}{12}$
Income (rents)	250	= 3,000 $\frac{1}{24}$ × 2
– Management costs	7	
= Income before tax	243	
Land tax	125	= 3,000 $\frac{1}{24}$
Associated charges	31.2	= 125 $\frac{1}{4}$
– Total tax levies	156.2	
Total income after tax	86.8	
% Income after tax/ production	9	
% Rents (revenues after tax/ land value)	3	

possible revenues of a theoretical great landowner, assuming that he had managed to rent out all the arable land on his demesne.

Our great landowner's theoretical rents would have been on the order of 3%.⁴²⁹ However, rent revenues would have been considerably higher, at ca. 8% on fisc lands or on privileged estates where the land tax and associated charges had been remitted by the state. A great landowner's revenues would be higher still if the personal taxes paid by his *paroikoi* had been assigned to him.

To conclude: according to these calculations, the theoretical tax levies must have been very considerable, and this would not have been possible unless yields were higher than is generally thought to have been the case. According to my hypotheses, the state would have levied a maximum 23% of the value of production in the form of a tax,⁴³⁰ with the same proportion reverting as surplus to the landowning farmer, in the case of a *zeugaratos*.⁴³¹ On estates, the surplus was shared between the great landowner and the farmers; each *zeugaratos* farmer would keep 14%,⁴³² and the great land-

⁴²⁹ Oikonomidès, "Terres du fisc," 331–32; though the author bases his calculations partly on other data and follows a different line of reasoning, the theoretical rents that he proposes are equal to or slightly lower than 3.3% of the value of the property, which is not very far removed from ours.

⁴³⁰ Table 1: the landowner's case.

⁴³¹ Table 1: 4.6 nomismata out of 20.

⁴³² Table 1: 2.8 nomismata out of 20.

owner 9% after tax.⁴³³ Of course, it would be a bit of luck to find a situation that matched this scheme, but the reality cannot have been very different. This is suggested by the following examples.

Two Concrete Cases The *praktikon* of Adam for Andronikos Doukas (*Patmos*, II: no. 50) contains precise but incomplete data about the farming of fisc property in the Miletos region in 1073 concerning the *oikoproasteion* of Baris and its dependencies. This property was situated on the alluvial plain of the Meander and outlying lands, which, according to the fisc's surveyors, constituted the most fertile region of the empire. This document has been studied for more than a century and has played a major part in shaping previous representations of the Byzantine rural economy, although in some respects it is a case apart. With the exception of one large domanial farm (3 plow teams, 420 modioi of sown land), these possessions were farmed indirectly; 2,210 modioi of arable land were farmed out to 51 *paroikoi*. The Baris land was put to producing cereals, rather than fruit or stock (221 nomismata of income to 38). Half of the theoretically cultivable land was in use.⁴³⁴ On average, each *paroikos*—generally speaking a *boidatos*—rented 43 modioi of arable land ($2,210/51$): the inference being that each *zeugaratos* rented an average 86 modioi. In Baris, rents (*pakton*) were paid in coin, at a rate of 1 nomisma for 10 modioi, or 20% more than the quantities given in the normative texts: 1 nomisma for 12 modioi in the case of first-quality land. In my opinion, this level of rent payments is explainable only by the exceptional fertility of the land. If we assume that all the land at Baris was first quality and that the yield was on the order of 1:5.6 (apparently a minimum, in view of the rent level), the surplus, over and above the 41% lost to levies (compared with 33% in the theoretical case), would be on the order of 3 nomismata for a tenant of 80 modioi (according to my calculation).⁴³⁵ At Baris, rents for mainly arable land, worth perhaps 6,449 nomismata,⁴³⁶ with revenues of 221 nomismata (for arable land actually being farmed), were on the order of 3.4%.

The situation at Radolibos seems to have been rather different, probably due to the role played by viticulture in the village economy. At the beginning of the twelfth century, 2,900 modioi of arable land, or ca. 30% of the level ground in the territory, were given over to cereals.⁴³⁷ As at Baris, the estate comprised a domanial farm: the arable land was mainly split into hereditary tenures (*staseis*) held by 122 *paroikoi*. Although these *paroikoi* owned about as many oxen as their counterparts at Baris, they grew cereals on almost half as much land. Instead, they owned vineyards, which were appar-

⁴³³ Table 2: 86.8 nomismata out of 1,000.

⁴³⁴ We estimate the theoretically cultivable area to be 5,391 modioi; the cultivated area was 2,210 modioi farmed by *paroikoi*, plus maybe 672 modioi ($420/2 \times 8$) for the domanial farm.

⁴³⁵ The *paroikoi* of Baris were probably a more complicated case, if we retain a hypothesis presented by Oikonomides (cf. *Patmos*, 2:30–31n): the sum of the tax owed by the *paroikoi* would show that they were not simply tenants but also the owners of some fields, on average 12 modioi per *paroikos*.

⁴³⁶ Assuming that, as we have seen to be the case in principle, the tax was set at twice the rent (1 nomisma per 10 modioi) and assuming the value to be 24 times the tax ($5,391/20 \times 24$).

⁴³⁷ Lefort, "Radolibos," 215, 219.

ently numerous, though we do not know the area they covered.⁴³⁸ Data that we do possess about 22 *zeugaratoi* shows that their tenure comprised on average 44 modioi of arable land. The *paroikoi* owed Iveron farming dues, which were probably paid wholly in kind (though some *paroikoi* did pay in coin): they paid a *pakton* in wheat and barley, plus, as we have seen, the *zeugologion*, totaling 21 modioi of cereals in the case of one *zeugaratos*.⁴³⁹ Assuming that the yield at Radolibos was on the order of 1:5.1, the levies exacted on the cereal production of these *zeugaratoi*, on the order of 26% (compared with 41% at Baris; 33% in our theoretical case), would produce only a low surplus of 0.8 nomisma. However, it is likely that the surplus at Radolibos was mainly provided by viticulture, the produce of which was probably marketed. These two examples serve to underline the diversity of the situation and the difficulty of engaging in any calculation.

Sharecropping Contracts Little more than the name is known about contracts of this nature between great landowners and tenants, and the precise clauses generally remain unknown.⁴⁴⁰ In the case of cereal culture, the half-share contract, *hemiseia*, whereby landowner and tenant seem to have shared equally the revenues and expenses of a small cereal-growing property, is mentioned in the *Farmer's Law*, though generally in connection with a small landowner without the means of cultivating a property on his own. Consequently, this type of contract is only marginally relevant to our discussion.⁴⁴¹

The *Farmer's Law* also alludes to dues of one ear of wheat in ten, reminiscent of the tithe, paid by the sharecropper (*mortites*) to the landowner.⁴⁴² The terms *morte*, *dekateia*, *dekatistes*, which, in relation to cereal culture, are sometimes used in the period under consideration, and the verb *apodekatizo*, recorded in the fourteenth century,⁴⁴³ obviously refer to a sharecropping contract, although we cannot be sure that the dues were always one-tenth of the gross production, as some of these terms suggest,⁴⁴⁴ unless it is assumed that the sharecropper also paid the land tax.⁴⁴⁵ Recall that, in the eleventh century, farming contracts appear to suggest higher levies, amounting at most to 25%.⁴⁴⁶ It would be surprising if levies on sharecroppers were any lower.⁴⁴⁷ The term

⁴³⁸ Cf. references to vines alongside the fields and to localities reminiscent of viticulture in *Iviron*, 2: no. 53.

⁴³⁹ *Iviron*, 2:290.

⁴⁴⁰ These contracts have been studied by Oikonomidès, "Terres du fisc," 332–33.

⁴⁴¹ *Farmer's Law*, § 12, 14, 15; Lemerle, *Agrarian History*, 38–39; Oikonomidès, "Terres du fisc," 332; Kaplan, *Les hommes et la terre*, 259.

⁴⁴² *Farmer's Law*, § 10.

⁴⁴³ *Morte* (*mourtai*), *Iviron*, 1: no. 15 (1008); *dekateia*, *Lavra*, 1: no. 69 (1196); *dekatistes*, Gautier, "Diatribes de Jean l'Oxite contre Alexis Ier Comnène," 31; *apodekatizo*, M. Goudas, "Βυζαντιακά έγγραφα τῆς μονῆς Βατοπεδίου," *ΕΕΒΣ* 3 (1926): 133.

⁴⁴⁴ H. F. Schmid, "Byzantinisches Zehnwesen," *JÖBG* 6 (1957): 45–110; Laiou-Thomadakis, *Peasant Society*, 219.

⁴⁴⁵ Lemerle, *Agrarian History*, 38.

⁴⁴⁶ Table 1: 5 nomismata rent for a production of 20 nomismata gross.

⁴⁴⁷ Kaplan, *Les hommes et la terre*, 503, does, however, allow that share cropping represented 10% of production.

dekateia sometimes occurs instead of *pakton*,⁴⁴⁸ and the more imprecise term of *morte* is mostly used, in the thirteenth- and fourteenth-century texts that H. F. Schmid analyzed,⁴⁴⁹ to distinguish the landowner from the tenant who is obliged to pay *morte*, suggesting that these words could possess the vague meaning of “dues.”⁴⁵⁰

Finally, several scholars have proposed the existence, in the twelfth century, of a third-share contract (*triton*), whereby a third of the crop went to the landowner. According to Oikonomides, there is some connection between this sharecropping contract and the *pakton*, which corresponded to a third of the production at Baris, though possibly not everywhere else as well.⁴⁵¹ It should also be stressed that the total dues bearing on the tenant (rent plus personal taxes) represented, in the theoretical case envisaged above, 33% of the production (cf. Table 1); however, this coincidence may not be significant.

Viticulture provided both farmer and great landowner with additional revenues, which may well have been high but cannot easily be estimated. As in the case of many other occupations, including stock raising, viticulture involved contracts between great landowners and farmers and a division of the revenues. Several texts show that the wine harvest was divided into equal shares between landlord and farmer.⁴⁵² However, a document dated 1089 notes that a tenth of the harvest was due to the landowner,⁴⁵³ and another, dated 1320, records the custom whereby a fifth of the wine produced by *paroikoi* was due to the master of the place.⁴⁵⁴ Nothing is known about the clauses of these various types of contract, and consequently we cannot understand the reasons for this diversity.

We are left with much that is uncertain, apart from the fact that the traditional gloomy perception of the rural economy has not been confirmed. My aim has been to suggest that cereal production, possibly supplemented by other agricultural or pastoral occupations, would have provided better-off peasants with the means of investing in production, in spite of a rate of taxation that was, in principle, high. This hypothesis allows

⁴⁴⁸ Cf. *Iviron*, 3:125 (*pakton* and *dekateia* are either equivalent or confused with one another); in the will of Maria the nun (1098, *Iviron*, 2: no. 47), the term *oikomodion* seems to be equivalent to *pakton*, which was paid in kind in the accounts of the Georgian steward at Iveron (ibid., appendix II). On the *oikomodion*, cf. G. Cankova-Petkova, *Za agrarnite otnošenija v Srednovekovna Bulgarija, XI–XIII v.* (Sofia, 1964), 91–95; *ODB*, s.v. “Oikomodion.”

⁴⁴⁹ Schmid, “Byzantinisches Zehnwesen,” 60–64.

⁴⁵⁰ *ODB*, s.v. “Morte.”

⁴⁵¹ Laiou-Thomadakis, *Peasant Society*, 219; Oikonomidès, “Terres du fisc,” 333; according to our working hypothesis, a holder of 80 modioi at Baris would have produced 23.3 nomismata gross and paid 8 nomismata rent, that is 34%; see too *ODB*, s.v. “Rent.”

⁴⁵² *Farmer's Law*, § 13.; an Italian act dated 953, Codex Diplomaticus Cavensis (Naples, 1873–93), mentioned by A. P. Kazhdan, *Derevnja i gorod v Vizantii, IX–X vv.* (Moscow, 1960), 93; Sathas, *MB* 6:620–21 (a 14th-century formulary); *MM* 2:509 (act dated 1401); cf. Oikonomides, “Terres du fisc,” 332 n. 50.

⁴⁵³ T. Uspenskii, “Mneniia i postanovleniia konstantinopol'skikh pomestnykh soborov XI i XII vv. o razdache tserkovnykh imushchestv (kharistikarii),” *IRAİK* 5 (1900): 32–41; cf. V. Grumel, *Les Régimes des actes du patriarchat de Constantinople*, vol. 1.2 (Paris, 1989), no. 949.

⁴⁵⁴ *Iviron*, 3: no. 77; on the 14th century, see Laiou, “Agrarian Economy,” 332–33.

us to understand how peasants in the thirteenth and fourteenth centuries (a time when documents become more precise) were able to erect mills, plant vineyards (as demonstrated by A. E. Laiou, "The Agrarian Economy"), and buy land. During the period under consideration, various indications confirm that some farmers did enjoy a minimal level of prosperity: we have seen how peasants, who had left their villages because of the insecurity of the times and had settled as tenants on an estate in Chalkidike in 996, were paying their dues (through sharecropping contracts) and, furthermore, possessed the means of paying the taxes incumbent on the lands they had abandoned, but which they owned. We could also refer to the peasant-soldiers in the *De re militari*, for whom it was quite normal to buy oxen (albeit by selling their army horses) as well as "everything that serves for agriculture."⁴⁵⁵ Whereas, both at that time and at the beginning of the eleventh century, some mills belonged to monasteries, others had probably been built by the peasants. One example of this is the mill at Dobrobikeia in the Symbolon region, for which the commune of this village owed tax.⁴⁵⁶ By the end of the period under consideration, the expansion of trade in the countryside suggests that the peasants, or at least some of them, possessed a few assets and were thus able to produce more, and in a different, better way.

Rural Craft Production

The growth in craft production was a significant feature in the development of the rural economy. It introduced new resources to the countryside and changed the very nature of some holdings by favoring exchanges within and without the village. True, there is little information in the texts and, as yet, not much from archaeology. Rural crafts do not appear to have been very widespread during the early Middle Ages.⁴⁵⁷ Though the *Geoponika* does indeed recommend the presence of smiths, carpenters, and potters on the estate, it mainly emphasizes the way estate inhabitants depended on their urban market:

The fact that agriculturists go to town to get their tools made is harmful. In fact, given that the need for tools is always pressing, this impedes the agriculturists; constant traveling to town slows them down. This is why one must have smiths and carpenters on the estates themselves or nearby. It is also very necessary to have potters, for whatever purpose, for one is sure to find clay on every property.⁴⁵⁸

A study of surnames denoting crafts borne by peasants in Macedonia between the tenth and the fourteenth century suggests that rural crafts were still poorly developed in the tenth and eleventh centuries. A list of 32 *paroikoi* in the Hierissos region in Chalkidike, dated 974, contains only two names of trades (mason and blacksmith), and none have been found at Drobrobikeia (among 24 peasants) at the beginning of the

⁴⁵⁵ Dagron, *Guérilla*, 272.

⁴⁵⁶ *Iviron*, 1: no. 30. In 1008, the inhabitants of Radochosta owned a mill, albeit only a ruined one: *Lavra*, 1: no. 14.

⁴⁵⁷ Patlagean, *Pauvreté économique*, 268–71.

⁴⁵⁸ *Geoponika*, 2.49.

eleventh century. By the beginning of the twelfth century, a list (partial because mutilated) of 122 *paroikoi* at Radolibos includes five craftsmen (carpenters, potters, a barrel maker, and the widow of a blacksmith); four can be counted at Dobrobikeia (potter, miller, mason, marble worker), one at Bolbos (cobbler), but none in the five other villages and hamlets owned by Iveron. Until the beginning of the twelfth century, no more than 4% of peasants possessed artisan surnames.⁴⁵⁹

However, a significant change occurred in Macedonia during the twelfth century and the first half of the thirteenth, when 8% to 10% of peasants bore the names of trades. By the beginning of the fourteenth century, the most frequently occurring trades were as follows: cobblers, blacksmiths, tailors, weavers, potters, lumberjacks, fishermen, and millers. Half of the villages included at least one craftsman, and some large villages reveal the presence of family shops, comprising between two and four craftsmen who were clearly working for a wider market.⁴⁶⁰ This allows us to think in terms of a growth in rural crafts at the end of the period under consideration.

Most of these craftsmen plied their trade on a part-time basis. There are as many *zeugaratoi*, *boidatoi*, and *aktemones* among them as among the rest of the population, both before and after the thirteenth century. Although some of them with little or no land or means of growing things were doubtless more specialized, the prevailing impression is one of an increased diffusion of artisan activities among peasant hearths, rather than that of a distinct economic group being formed. People had always spun, woven, and sewn at home, but there came a time when the level of peasant demand elicited enough regular exchanges and when the scope of these domestic tasks reached far enough beyond the framework of the hearth for this process to give rise to specific surnames. In some cases, the search for non-agricultural income may well be an indicator of greater poverty, but on the whole the growth of the artisan sector cannot be envisaged independently of a minimal level of prosperity in the villages and is evidence, rather, of a process of growth. The availability of shoes, clothes, tools, and vessels locally freed more time for making agricultural improvements.

I do not propose to study the way exchanges in the countryside were organized; this question, and trade in general, is treated in A. Laiou's chapter "Exchange and Trade, Seventh–Twelfth Centuries," (in this volume). Peasants must have been able to sell part of their agricultural produce, probably from the eighth century on, if only to secure the gold pieces they required to pay their taxes and sometimes their rents too. By the end of our period, they were probably selling craft products as well. Whether or not they used traders, they were able to take part in exchanges during local fairs, which began growing in number in the tenth century.⁴⁶¹

⁴⁵⁹ *Lavra*, 1: no. 6; *Iviron*, 1: no. 30; *Iviron*, 2: no. 51; this is still the case in the *praktikon* for the region of Athens (prior to 1204): "Fragment d'un *praktikon* de la région d'Athènes (avant 1204)," ed. E. Granstrem, I. Medvedev, and D. Papachryssanthou, *REB* 34 (1976): 5–44: four names of trades feature in the mutilated list of 85 *paroikoi*.

⁴⁶⁰ "Anthroponymie," 236–38.

⁴⁶¹ Koukoules, *Bíos*, 3:270–83; S. Vryonis, "The Panegyris of the Byzantine Saint," in *The Byzantine Saint*, ed. S. Hackel (London, 1981), 196–226; C. Asdracha, "Les foires en Epire médiévale," *JÖB* 32.3 (1982): 437–46; *ODB*, s.v. "Fair"; Laiou, "Exchange and Trade," 714–16. Some of these fairs

The great landowners appear to have been important contributors to exchanges between town and countryside, as suggested above. M. Živojinović has recently studied the commercial role played by the great monasteries of Athos; further examples could be cited.⁴⁶² Landlords' agents may indeed have purchased crops from peasants who owed rent in coin; in any case, they stored the produce of dues paid in kind prior to transporting them to town, where animals raised on domanial grasslands were also taken. Part of the produce was consumed in the great landowner's town house;⁴⁶³ the rest was sold. Well beyond eleventh-century Byzantium, the desire "to live off one's own" constituted an aristocratic ideal, though this attitude did not prevent great landowners from selling their production, nor did it impede the expansion of commercial exchanges.

That the rural economy did develop is unarguable, although it was a slow process that may have speeded up in the twelfth century along with the progress of long-distance trade in the Mediterranean world. I have tried to show what, in my opinion, made this possible. The fundamental reason, set against a background of demographic growth, was surely the progressive emergence of a growing trend to organize "la vie des campagnes," to use the title of the famous study by G. Duby.⁴⁶⁴ In many places and many respects, this was based on the complementarity between villages, which provided the bulk of the production, and estates, which ensured better management. The state's contribution to this development was that of ensuring greater security; it played an important part, by way of fiscal measures, in setting up these structures.

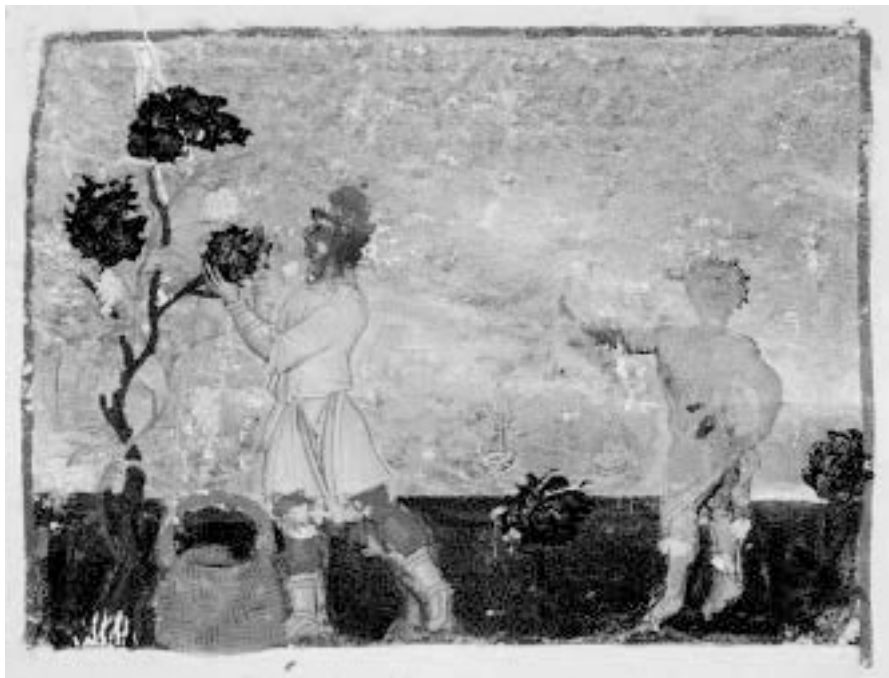
Many points remain obscure, but the explanation for the events of 1204 should not be sought in the faults and backwardness of Byzantine agronomy nor in the way the rural economy was organized. I have tried to describe some of the mechanisms and modalities of an expansion that peaked everywhere in Europe in the course of the thirteenth century. This is what A. Laiou's research also suggests, as may be seen in the following chapter, "The Agrarian Economy, Thirteenth–Fifteenth Centuries."

turned into weekly markets, as in the case of the fair of St. Paraskeve near Radolibos, possibly in the 13th century; cf. *Iviron*, 3: no. 74.

⁴⁶² M. Živojinović, "The Trade of Mount Athos Monasteries," *ZRVI* 29/30 (1991): 101–16; Kaplan, *Les hommes et la terre*, 30–46; Magdalino, *Manuel*, 169–71.

⁴⁶³ Cf. the will of the nun Maria (Pakouriane), *Iviron*, 2: no. 47.

⁴⁶⁴ G. Duby, *L'économie rurale et la vie des campagnes dans l'Occident médiéval*, 2 vols. (Paris, 1962).



1. Grape harvest



2. Plowing

(Figs. 1–4) Mount Athos, Vatopedi monastery, cod. 1199, fols. 44v, 65r, 89v, 109v (year 1346)
 (after Οἱ Θησαυροὶ τοῦ Ἁγίου Ὁρους: Εἰκονογραφημένα χειρόγραφα, 4 vols. [Athens, 1973–91],
 4: pls. 313, 315–17)



3. Pruning



4. Transfer of wine

(Figs. 1–4) Mount Athos, Vatopedi monastery, cod. 1199, fols. 44v, 65r, 89v, 109v (year 1346)
 (after Οἱ Θησαυροὶ τοῦ Ἁγίου Ὄρους: Εἰκονογραφημένα χειρόγραφα, 4 vols. [Athens, 1973–91],
 4: pls. 313, 315–17)



5. Plants and agricultural labor. Mount Athos, Esphigmenou monastery, cod. 14, fols. 386r and 386v (11th century) (after *Οἱ Θεσσαυροὶ τοῦ Ἁγίου Ὁρους*, 2: pls. 346, 347)



6. Sowing. Mount Athos, Iveron monastery, cod. 463, fol. 20r (12th–13th century)
(after Οἱ Θεσσαυροὶ τοῦ Ἁγίου Ὁρους, 2: pl. 68)



7. Harvest. Mount Athos, Vatopedi monastery, cod. 602, fol. 415v (13th century)
(after Οἱ Θεσσαυροὶ τοῦ Ἁγίου Ὁρους, 4: pl. 155)

The Agrarian Economy, Thirteenth–Fifteenth Centuries

Angeliki E. Laiou

There are important continuities between this period and the twelfth century, but also very significant differences.¹ The conquest of the empire by the Crusaders in 1204 and the subsequent division of the Byzantine territories affected the agrarian economy as it did other aspects of economic organization and economic life.² These territories, split among small Greek and Latin states, lost much of the cohesion they may have had: the Byzantine state did not and could not function as a unifying force, and, in the thirteenth century, there was very little to replace it. Thus economic developments in the empire of Nicaea were quite unrelated to developments in Macedonia or Epiros. After the reestablishment of Byzantine political control in Constantinople, there was an effort, which lasted through the reign of Andronikos III (1261–1341), to reunite the former territories of the empire. But, in fact, breakaway states still existed: Epiros and Thessaly were briefly reunited to the Byzantine state in the 1330s, only to fall to Stephen Dušan in 1348. After the great civil war of the mid-fourteenth century, imperial territories kept shrinking, with short periods of respite.

¹ K. V. Chvostova, *Osobennosti agrarnopravovykh otnoshenii v pozdnei Vizantii, XIV–XV vv.* (Moscow, 1968); P. Charanis, “The Monastic Properties and the State in the Byzantine Empire,” *DOP* 4 (1948): 53–118; J. Lefort, “Rural Economy and Social Relations in the Countryside,” *DOP* 47 (1993): 101–13; idem, “Population et peuplement en Macédoine orientale, IXe–XVe siècle,” in *Hommes et richesses dans l’Empire byzantin*, 2 vols. (Paris, 1991), 2:63–82; idem, “Radolibos: Population et paysage,” *TM* 9 (1985): 195–234; idem, *Villages de Macédoine*, vol. 1, *La Chalcidique occidentale* (Paris, 1982); idem, “Fiscalité médiévale et informatique: Recherche sur les barèmes pour l’imposition des paysans byzantins au XIVe siècle,” *RH* 252 (1974): 315–52; A. Laiou-Thomadakis, *Peasant Society in the Late Byzantine Empire: A Social and Demographic Study* (Princeton, 1977); eadem, “The Economy of Byzantine Macedonia in the Palaiologan Period,” in press; N. Kondov, “Über den wahrscheinlichen Weizenantrag auf der Balkanhalbinsel im Mittelalter,” *EtBalk* 10 (1974): 97–109; N. Svoronos, “Le domaine de Lavra sous les Paléologues,” *Actes de Lavra*, ed. P. Lemerle, A. Guillou, N. Svoronos, and D. Papachryssanthou, *Archives de l’Athos*, 4 vols. (Paris, 1982), 4:65–173; H. Antoniadis, “Villages désertés en Grèce: Un bilan provisoire,” in *Villages désertés et histoire économique: Les hommes et la terre*, vol. 11 (Paris, 1965), 343–417; G. Ostrogorskij, *Quelques problèmes d’histoire de la paysannerie byzantine* (Brussels, 1956); idem, *Pour l’histoire de la féodalité byzantine* (Brussels, 1954); idem, *Les praktika byzantins*, in *ibid.*, 259–388; A. Kazhdan, *Agrarnye otnosheniia v Vizantii, XII–XIV vv.* (Moscow, 1952).

² Cf. K.-P. Matschke, “Commerce, Trade, Markets, and Money, Thirteenth–Fifteenth Centuries,” *EHb* 755–90.

Until the recovery of Constantinople by Michael VIII, the Byzantine lands consisted of the empire of Nicaea, the despotate of Epiros, and the Macedonian lands they slowly brought under control. After 1261, Byzantine territories included, at various times, Macedonia, Thrace, parts of Asia Minor, the islands of the eastern Aegean which were gradually lost in the course of the fourteenth century, parts of Epiros and Thessaly, and the despotate of the Morea, in the Peloponnese. Trebizond had quite an independent development. In terms of the agrarian economy, the continuities are provided by long-term factors such as the configurations and fertility of the soil and, to a lesser degree, by historical factors such as the prevalent type of exploitation, though these were also influenced by new conditions. The differences are dominated by the fact that the Byzantine state no longer functioned as an efficient mechanism of integration. An integrating factor did exist in the fourteenth and fifteenth centuries: it was international trade, dominated and organized by the Italian city-states, Pisa for a while, but primarily Genoa and Venice. The needs and activities of the Italian merchants made of the eastern Mediterranean an integrated trade system, in which the various regions were drawn, each with its own relations with the Italians. As a result, there are regional economies—those of Macedonia and Thrace, Epiros, Thessaly, and the Peloponnese—with some contact with each other to be sure, but with the important factor being their relationship with the Italians and their role in the trading system of the eastern Mediterranean.³ The agrarian economy was affected by this situation, as it was affected by the invasions, conquests, and insecurities that are frequent in this period. There are also chronological breaks within this period, although they differ to some extent from area to area.

General Characteristics

Population and Settlement

In any preindustrial agrarian economy, the population is a very important factor of production. It has already been established that an increase in the population of the countryside is to be credited for the increase in agricultural production after the tenth century.⁴ For the thirteenth to the fifteenth century, our information is highly skewed. It is scarce for the thirteenth century in all areas except Asia Minor, and even there it does not allow quantitative analysis. It is very rich for fourteenth- and fifteenth-century Macedonia, but not for other regions. The fragmentary information suggests that there was, overall, a population increase continuing from the early twelfth century until the early fourteenth, although, as we shall see, there were also areas of depopulation. Asia Minor has a general aspect of being well populated and prosperous in the thirteenth century.⁵ In eastern Macedonia, the pattern of settlement is the strongest

³ On the importance of regional economies, cf. Matschke, "Commerce."

⁴ J. Lefort, "The Rural Economy, Seventh–Twelfth Centuries," *EHB* 261ff.

⁵ See below, 314–15.

indicator of overall population increase: new hamlets were created, with a small peasant population, and the forest retreated.⁶ In western Macedonia, the information is less precise, but it seems to reflect a well-peopled area, with villages lying in relatively close proximity to each other; many of these villages appear in the sources in the thirteenth century, but they may well be older, and the movement of population is not at all clear.⁷ For Epiros and Thessaly we have no usable information at all, but the judicial decisions and opinions of Demetrios Chomatianos, archbishop of Ohrid, and John Apokaukos, from the early thirteenth century, do not indicate a demographic or economic crisis, although the only demographic figures we can establish, the number of children per couple (of a first marriage), is disturbingly low.⁸

What this suggests is that the political upheavals attendant on the Fourth Crusade did not have major demographic (or economic?) consequences in the countryside. Yet such a blanket statement obscures the fact that there was, in some areas, decline, although its extent may have been limited. In Asia Minor, it seems that some peasants fled their lands during the campaigns of Henry of Flanders, but then returned.⁹ It is certain that many dependent peasants (*paroikoi*) found a good opportunity to stop paying their dues to a landlord, but this is not, perhaps, of demographic significance.¹⁰ In Macedonia, on the other hand, before its reconquest by the Byzantines, there is sporadic evidence of demographic problems that cannot be linked to specific political events. In 1262 the village of Melintziani (in the theme of Thessalonike), which belonged to the monastery of Iveron, was called a *palaiochorion*, an abandoned village. It had 9 households of *paroikoi*, as against 23 in 1104, and it took thirty-nine years for the population to exceed this figure (29 households in 1301, 39 in 1321).¹¹ Some villages seem to have been abandoned.¹² In 1288 a piece of land belonging to the monastery of Skorprios, with vineyards and olive trees, which had previously been productive, was found deserted, unproductive, with only one monk, and was given to Hilandar to restore to production.¹³ Similarly, the lands of the monastery of Skamandrenou, including an olive grove, were utterly deserted in 1266/67, when they were given to the monks of Kutlumus, who restored them to production.¹⁴ The extent of such disrup-

⁶ Lefort, "Population et peuplement," 71, 75.

⁷ V. Kravari, *Villes et villages de Macédoine occidentale* (Paris, 1989), 57–58.

⁸ A. Laiou, "Contribution à l'étude de l'institution familiale en Epiros au XIII^e siècle," in *FM* 6 (1984) = *Gender, Society and Economic Life in Byzantium* (Aldershot, 1992), art. 5, 281–83.

⁹ *MM* 4:34–41.

¹⁰ See below, 342–43.

¹¹ *Actes d'Iviron*, ed. J. Lefort, N. Oikonomides, and D. Papachryssanthou, *Archives de l'Athos*, 4 vols. (Paris, 1985–95), nos. 29, 52, 70, 79. The chrysobull of Michael VIII, in 1259, speaks in general of the decline in the fortunes of the monastery during the Frankish occupation: *ibid.*, no. 58.

¹² T. Pazaras and A. Tsanana, *Τό αρχαιολογικό έργο στή Μακεδονία καί Θράκη* (Thessalonike, 1995), suggest that Vrya was abandoned between 1259 and 1302.

¹³ *Actes de Chilander*, ed. L. Petit (repr. Amsterdam, 1975) (= *VizVrem* 17 [1911]), no. 10 (1288), 133, 145. For a general sense of renewal, even in agricultural affairs with the imminent end of the Frankish occupation or for a period of years after it, see, for example, *MM* 4:336ff (Michael VIII).

¹⁴ *Actes de Kastamonitou*, ed. N. Oikonomides, *Archives de l'Athos* (Paris, 1978), no. 3 (1317).

tion is not known, and the evidence is not sufficient to counterbalance the indications of expansion. One might, however, suggest that the restoration of Byzantine rule in Macedonia brought an increase in both prosperity and population. Dedicatory inscriptions in and around Kastoria attest to a certain prosperity of the provincial magnates, people with a limited amount of property, during the second half of the thirteenth century and the first part of the fourteenth.¹⁵

In the Peloponnese, too, the recapture of the areas of Mani, Monemvasia, Geraki, and Mystra, in 1262, may have brought some prosperity to the local aristocracy, who built churches and commissioned dedicatory inscriptions in the Mani. The peasants of the area also show signs of modest well-being, which might be used as an indirect indicator of demographic health.¹⁶

The thirteenth century is also the last period during which one may speak of significant land clearance, that is, the act of bringing previously uncultivated land into cultivation. Jacques Lefort has argued persuasively that there was significant demographic and economic development in Macedonia after the tenth century, and other scholars have also posited impressive expansion, including land clearance, in other parts of the empire in the eleventh to twelfth centuries.¹⁷ In the thirteenth century, much of the solid information for that comes from Asia Minor. Especially during the reign of John III Vatatzes, there are indications for a restructuring of property and better organization of production. There is mention of considerable investment in agriculture and animal husbandry and of the establishment of new villages. There is clear evidence of a booming agricultural economy, and there was some land clearance, but it is not certain how much.¹⁸ Land clearance and the placing of uncultivated land under cereal cultivation required some organization, and was probably best done by relatively large units such as a monastery or the state. John Vatatzes is specifically said to have encouraged investment by the aristocracy and the monasteries. Indeed, the imperial farms became models for the organization of other estates.

In Macedonia there is impressive evidence for land clearance at the local level: the inhabited area of the village of Radolibos expanded, between the early twelfth and the mid-fourteenth century, into hilly territory, which necessitated land clearance.¹⁹ Such examples, especially if they can be multiplied, are the best and most trustworthy evi-

¹⁵ S. Kalopissi-Verti, *Dedicatory Inscriptions and Donor Portraits in Thirteenth-Century Churches of Greece* (Vienna, 1992), 33. I owe this reference to Sharon Gerstel.

¹⁶ Kalopissi-Verti, *ibid.*, 35–37. V. Panagiotopoulos thinks that the population decline in the Peloponnese dates from the second half of the 14th century: V. Panagiotopoulos, *Πληθυσμός και οικισμοί της Πελοποννήσου, 13ος–18ος αιώνας* (Athens, 1987), 44.

¹⁷ Lefort, “Rural Economy;” A. Harvey, *Economic Expansion in the Byzantine Empire, 900–1200* (Cambridge, 1989).

¹⁸ *Nicephori Gregorae Byzantina historia*, ed. I. Schopen and I. Bekker, 3 vols. (Bonn, 1829–55), 1:42–45 (hereafter Gregoras); George Pachymérès, *Relations historiques*, ed. A. Failler, 2 vols. (Paris, 1984), 97–99; Skoutareiotēs, *Ἀνωρύμου Σύνοψις Χρονική*, in K. Sathas, *Μεσαιωνική Βιβλιοθήκη*, 7 vols. (Venice, 1841–1914), 7:506–8; cf. N. Oikonomidēs, “The Role of the Byzantine State in the Economy,” *EBH* 1027–28.

¹⁹ Lefort, “Radolibos,” 207ff.

dence of increase of population and expansion of settlement. However, by the late thirteenth century there is no indication of extensive clearance of new lands of the kind that took place in the eleventh to twelfth centuries, when lay and ecclesiastical landlords (e.g., Boilas) cleared tracts of unoccupied and uncultivated land and established new estates.²⁰ For land clearance of abandoned areas, one has to wait until the early fifteenth century, with the intervention of Emperor John VII, who restored to cultivation land in Kassandreia and eventually turned it over to the monks of Lavra, Xeropotamou, Vatopedi, St. Paul on Athos, Pantokrator in Constantinople, and St. John Prodromos in Thessalonike.²¹ This, however, came at the end of a long period of disruption of the population and the productive capacity of the countryside due to enemy invasions, civil war, the plague, and, while it is a sign of an effort to rehabilitate land, it certainly is no sign of large-scale land clearance.

The demographic expansion came to an end in the course of the fourteenth century. In Byzantine Asia Minor, the political and military instability of the first decades of the century seem to have reduced the population. As for Macedonia, there is some question as to when the population began to decline, because the information is not consistent. In any case, the data concerns the *paroikoi* of the monasteries of Mount Athos, and it is not necessary that what is true of them is also true of the population generally. Some villages, such as Radolibos, Melintziani, and Selada, continue to show an increase in the number of households until 1320. Other villages, such as Gomatou, show a decrease. By 1341 the greatest number of villages for which we have information show a decline in the number of households and also a general decline in the household coefficient, with the households losing members. This decline, most evident for the *paroikoi* of the monastery of Iveron, for which we have data reaching to 1341, has been interpreted either as a short-term demographic crisis in a period of overall vitality²² or, on the contrary, as a structural crisis.²³ What is certain is that the population decline becomes catastrophic soon after 1341. By the middle of the fourteenth century, Nikephoros Gregoras could say that the peninsula of Kassandreia, once populous, was “empty of inhabitants”; he was, of course, writing after the ravages of the civil war and the plague.²⁴

It is also certain that the economic situation of the *paroikoi* of Macedonia deteriorated in the course of the first half of the fourteenth century. By whatever measure of wealth one might use—ownership of oxen, ownership of vineyards, ownership of arable land in the villages where *paroikoi* had arable²⁵—the wealth of peasant households declined

²⁰ P. Lemerle, *Cinq études sur le XI^e siècle* (Paris, 1977), 59ff; cf. Lefort, “Radolibos,” 207ff, who speaks of “vastes défrichements,” between the beginning of the 12th century and the middle of the 14th. He notes that in the late 13th century the expansion was into marginal lands. Cf. also Lefort, “Rural Economy.”

²¹ *Lavra*, no. 159, *Dionysiou*, no. 10, and see below, 361–62.

²² *Iveron*, 4.18; Lefort, “Population et peuplement,” 75. Lefort considers that the population increase continued in the first half of the 14th century.

²³ Laiou-Thomadakis, *Peasant Society*, chap. 6.

²⁴ Gregoras, 1:245.

²⁵ On this question, see below, 333ff.

between 1300 and 1320 and also between 1320 and 1341. Indeed, wealth decreased at higher rates than did the number of households, which indicates that the cause of the economic deterioration is not the division of property among the heirs of a head of household.²⁶ Is this a crisis of overexpansion? It has been argued that this was, indeed, the case, and that the expanded population had moved into marginal lands, which produced correspondingly lower revenues.²⁷ This is undoubtedly so in villages with dense settlement; but there were also villages where land was abundant. It must also be noted that there was, in this period, pressure on the peasants to sell their lands and vineyards, not to other peasants but to great landed proprietors, whether lay or ecclesiastic.²⁸ There was, however, no increase in the price of land. Peasants sold at low prices, and the fact that the price of land in the countryside remained stable, or even decreased if the devaluation of the coinage is taken into account, suggests that there was no major overall demographic pressure.²⁹ The impoverishment of the peasantry might also be sought in social and economic factors, primarily in the fact that a significant number of them owned no oxen and no arable land, which, even though there were ways to compensate for it to some extent, was, nevertheless, not conducive either to increase of wealth or to stability.³⁰

Thus, although some villages (the prime example is Radolibos) were very close to the limit of their possibilities as far as population was concerned, in other areas the available arable land went begging for labor. There was a certain competition among landlords for peasant labor. The *eleutheroi*, poor peasants, some of whom worked as day laborers, were in demand, and a number of grants of land include clauses regarding the right of the grantee to install peasants on his land, should he be able to find them.³¹ The land of the monastery of Docheiariou in Rosaion was populated, in 1338, by nine families of newcomers, all of whom bore names that originated from toponyms. In 1341, another nine families of newcomers appear in that village. The village population thus was far below its potential in 1338.³²

Around the middle of the fourteenth century, there was a precipitous demographic decline in Macedonia. Villages were abandoned (the term *palaiochorion*, deserted village, becomes common); others fell to the population levels of the early twelfth century.

²⁶ Laiou-Thomadakis, *Peasant Society*, 203ff, and table V-9; cf. Lefort, "Population et peuplement," 77.

²⁷ J. Lefort and J.-M. Martin, "L'organisation de l'espace rural: Macédoine et Italie du Sud (Xe-XIIIe siècle)," *Hommes et richesses* (as above, note 1), 2:25.

²⁸ Laiou-Thomadakis, *Peasant Society*, 208, 182–85.

²⁹ On land prices, see C. Morrisson and J.-C. Cheynet, "Prices and Wages in the Byzantine World," *EHB* 802–4, table 4.

³⁰ See below, 333ff.

³¹ See, for example, *Les archives de St. Jean Prodrome sur le mont Ménécée*, ed. A. Guillou (Paris, 1955), no. 8; *Actes de Zographou*, ed. W. Regel, E. Kurtz, and B. Korablev, Archives de l'Athos (St. Petersburg, 1907; repr. Amsterdam, 1969), no. X; *Actes de Philothée*, ed. W. Regel, E. Kurtz, and B. Korablev, in *VizVrem* 20 (1913), no. 9 (1346); *Actes de Kutlumuš*, ed. P. Lemerle, 2d ed., Archives de l'Athos (Paris, 1988), no. 21 (1348); *Chilandar*, nos. 20 (1304), 30 (1314). Cf. MM, 4:248–49.5.14, and Ostrogorskij, *Problèmes*, 34ff.

³² *Actes de Docheiariou*, ed. N. Oikonomides, Archives de l'Athos (Paris, 1984), no. 19 (1338), and pp. 145–46; cf. *Docheiariou*, no. 20 (1341).

Cultivated land returned to fallow, and the vegetation of the hillsides was regenerated.³³ The reasons for this decline were many. If there was a secular downward trend before 1341, no doubt it contributed significantly to the decline. But there were also catastrophic causes. In the first decade of the fourteenth century, the Catalan raids had caused disruption and dislocation, with some demographic effects which, however, were localized. Similarly, periodic invasions by the Serbs in Macedonia (in the 1280s and the 1290s) and the Tatars in Thrace in 1320, 1321, and 1324, and the first civil war between Andronikos II and Andronikos III (1321–28), must have had very destructive short-term effects.³⁴ The situation, however, became unrelieved after 1341. Insecurity increased exponentially because of the great civil war. John Kantakouzenos' Serbian allies were explicitly out for booty, while his Turkish allies took not only booty but also slaves. Finally, there was the plague of 1347, which is attested in Macedonia as it is on Lemnos, in Constantinople, and in the Peloponnese.³⁵ Although its effects on the countryside can only be surmised, it is safe to assume that it was an important factor in the evident depopulation, especially since it recurred throughout the rest of the century. The short chronicles and other sources show, apart from the great epidemic of 1347–48, outbreaks in 1361–62 in Constantinople and the Peloponnese, in 1373–74 in Arta, in 1380 in Pera, in 1409–10 in Constantinople (with 10,000 dead), in 1422 in the Peloponnese, and in 1424 in Mytilene. A Peloponnesian Short Chronicle gives a dreadful list of nine outbreaks between 1347 and 1431, only to come to a tenth outbreak in 1440.³⁶ In the Peloponnese, there is some evidence of poverty in the late fourteenth century, which could well be due to a decrease in population.³⁷ During the last half century of the existence of the Byzantine state, its territories were too few and dispersed to allow any kind of general discussion; there are signs of the beginning of a demographic recovery in Macedonia, but they are rather weak.

The Village

The village is the most important unit of settlement. It also retained some economic functions, although in most areas these were becoming deeply eroded by the role of the large estate as an organizing factor in production. A village extended over territory that included arable land, vineyards, pasture lands, and uncultivated areas, the proportion of cultivated and uncultivated areas varying from place to place; in Macedonia, the villages of Melintziani and Mamitzon, among others, had a high proportion of arable land, while some villages, such as Krya Pegadia, included mountainous and uncultivable land. The population also varied, some villages being quite large. Thus Goma-

³³ J. Lefort, *Paysages de Macédoine* (Paris, 1986), 105.

³⁴ A. Laiou, *Constantinople and the Latins; The Foreign Policy of Andronicus II, 1282–1328* (Cambridge, Mass., 1972), 281, 291.

³⁵ Lefort, "Population et peuplement," 79–80.

³⁶ P. Schreiner, *Die byzantinischen Kleinchroniken*, 3 vols. (Vienna, 1975), 33/6, 8, 9, 12, 29, 36–37; 7/24; 9/41; 31/6; 89; plagues in 1347–48, 1364–65, 1388–89, 1398.

³⁷ See below, 318.

tou had 537 inhabitants in 1321; the monastery of Lavra had 503 *paroikoi* in Selada in 1300. Radolibos, in the theme of Strymon, was a very large village with a population of approximately 1,000 people.³⁸

Insofar as the economy is concerned, we can discern some functions that villagers undertook together, and we can guess at others. The inhabitants of the village of Dryanoubaina in Thessaly in 1271 decided, by common agreement, to add to their own taxes the tax due on a piece of property, sold to the Maliasenoi by Michael Archontitzes, presumably an inhabitant of the village.³⁹ Villagers of the Mani, also, perhaps, independent smallholders, got together to build small churches in the late thirteenth century. One dedicatory inscription speaks of the restoration of a church, paid for by “the head men [of the village] and the commonality.”⁴⁰ This was, possibly, a village of independent peasants. The inhabitants of a village might act together to cultivate certain lands, or to erect a mill, or to tear one down when they felt that it was encroaching on their territory, as happened in both Asia Minor in the thirteenth century and Macedonia in the fourteenth.⁴¹ They might engage in disputes, both legal and physical, with local landlords; they might harass the local landlords or dispute the right of landlords to levy taxes or rents on them. All of these actions are much more frequent in thirteenth-century Asia Minor than in fourteenth-century Macedonia. The most important, perhaps the richest, peasants of a village, the *protogeroi*, played a role in both the internal affairs of a village and its relations with landlords.⁴²

When a person or an institution received a grant of land, the grant most commonly, in this period, consisted of part or the whole of a village and its inhabitants. If a village belonged to two or more landlords, the economic cohesion could be disrupted, for it was possible for the *paroikoi* of various landlords in the same village to hold their property under different conditions.⁴³ For example, it was possible for some of them to be given land they would cultivate and pay taxes on, while others might have no land of their own but simply farm the domain lands, both with labor services and with tenancy agreements. Such arrangements would, one supposes, tend to reduce the amount of economic cooperation among the peasants. On the other hand, the stark fact that the great majority of peasants (at least of the *paroikoi* of Macedonia, for whom alone we have sufficient information) did not own a team of oxen necessitates economic cooperation by village inhabitants. It is also possible, of course, that the problem was partly solved by the use of animals belonging to the landlord.⁴⁴ Economic cooperation of a different kind may be seen among some households: while the majority of households

³⁸ *Iviron*, 4:19 n. 146.

³⁹ MM 4:391–93, and cf. 396–99.

⁴⁰ Kalopissi-Verti, *Dedicatory Inscriptions*, p. 65, no. 17 (mid-13th century): δηα [συνδρ]ομης τον προκριτον κε του κηνου λαου.

⁴¹ Laiou-Thomadakis, *Peasant Society*, chap. 2, esp. pp. 60ff.

⁴² *Ibid.*, 63.

⁴³ Ostrogorskij, *Praktika*, 350–51.

⁴⁴ See below, pp. 334–35.



Last Judgment: men who plow and harvest in the fields of others. Church of St. George near Kouvaras in Attica, fresco, 13th century (after D. Mouriki, "An Unusual Representation of the Last Judgment in a Thirteenth-Century Fresco at St. George near Kouvaras in Attica," *Δελτίον τῆς Χριστιανικῆς Ἀρχαιολογικῆς Ἑταιρείας*, ser. 4, vol. 8 [1975–79]: pl. 89)

consisted of nuclear families, there was a certain number of horizontally extended households, where siblings and their children formed a single fiscal unit and pooled their resources. They might hold patrimonial land undivided, and in that case economic cooperation was a given. The commentary to the novel on *protimesis* begins the discussion of the law with the following statement: "My father and your father were brothers . . . and our parents did not divide their property. We, too, retained the property undivided, . . . and sometimes I cultivated one piece of land and you the other . . . , or we worked the same land together and in common."⁴⁵

There was, then, economic cooperation among relatives and, we must suppose, among inhabitants of the same village. But in the areas where the large estate was important (everywhere except Epiros and, perhaps, western Greece), the rights and interests of the estate owner also intervened and influenced the organization of the productive activities of the village inhabitants.

Production

A general characteristic of the agrarian economy, not limited to this period, is that, in terms of production this is still, and always, the world of polyculture and polyactivity, with the inherent capability both of serving a self-sufficient economy, or self-sufficient units of production, and, on the other hand, of transcending self-sufficiency through surplus production of staples or through differentially higher investment in marketable crops.⁴⁶ There is, in other words, a combination of auto-consumption and marketability, the proportions of which vary with the terrain, products, conditions, type of tenure involved, and accessibility of markets. In the period under discussion, there were market outlets for almost all agricultural products in virtually all areas. That polyculture is a general phenomenon means that all regions produced some grain and some form of fat (olive oil or butter); all raised some animals, whether oxen, horses, donkeys and mules, or sheep and goats, or pigs. All areas produced garden vegetables; most areas produced wine. Beekeeping may have been a generalized activity too, and fishing was common in areas near the sea or near streams and rivers. The production of industrial crops—cotton, silk, wool, linen, and flax—varied in intensity. It has seemed best to approach the question of production by region and discuss various products in greater detail depending on the region. Because of the state of the sources, the treatment of the various regions is necessarily unequal.

⁴⁵ Zepos, *Jus*, 1:198–204; cf. A. Laiou, *Mariage amour, et parenté à Byzance aux XIe–XIIIe siècles* (Paris, 1992), 148ff.

⁴⁶ On the long-term aspects of this phenomenon in the Greek lands to which, with the exception of Asia Minor, the empire was reduced in this period, see G. Dertilis, "Terre, paysans et pouvoir économique (Grèce, XVIIIe–XXe siècles)," *AnnalesESC* 47 (1992): 273–91. See also M. Aymard, "Autoconsommation et marchés: Chayanov, Labrousse ou Le Roy Ladurie?" *AnnalesESC* 38 (1983): 1392ff.

*Regional Production and Products**Asia Minor*

For Byzantine Asia Minor, the thirteenth century was a period of prosperity, which was interrupted in the late part of the century by the punitive taxation practices of Michael VIII and in the early fourteenth century by the insecurity created by the Turkish advance and by the activities of opportunistic mercenaries of the empire, such as the Catalans.⁴⁷ Bithynia was a rich area, with alluvial soil that produced grain, and with olive trees and olive groves, vineyards, and forests. The region of Smyrna was also very fertile; cereals were cultivated in the plain of Memaniomenos; there were vineyards along the coastland and large flocks in the Maeander valley. The mountain forests produced wood. Oak trees were valuable: they were the object of sale or donation, and in one case the sale involved a group of thirty-six oak trees along with the land on which they grew.⁴⁸ Fruit trees and groves are also attested in the Maeander valley, and mulberry trees are mentioned in 1247 on the properties of the convent of Koteine, near Philadelphia.⁴⁹ However, here as elsewhere, the sporadic mention of mulberry trees should not be taken as a sure indicator of silk production, since the trees are also cultivated for their fruit. Fishing was an important secondary activity, and *vivaria* are mentioned; one, in Smyrna, was important enough to have been granted as a *pronoia*. Salt pans are to be found along the coast, and this is a general phenomenon along the coasts of Macedonia and the Peloponnese as well.⁵⁰ The natural resources of the area included iron and alum. The alum mines of Phokaia were exploited by the Genoese after 1275.

The prosperity of Asia Minor in the thirteenth century was due in considerable part to the economic policies of the Laskarid emperors, who invested heavily in agriculture and animal husbandry. John III Vatatzes, we are told, made it his business to organize properly the production of imperial estates and encouraged others to do the same, so that the empire of Nicaea would be self-sufficient.⁵¹ The monastery of Lembiotissa was only one of the landlords who were supported and encouraged by John Vatatzes. In 1228 he restored the church, built cells and a refectory, and gave to the monastery villages and *paroikoi*. He also confirmed in the property of the monastery a *vivarion* that the monks had created at their own expense, two water mills, and some olive trees,

⁴⁷ For Asia Minor, see H. Ahrweiler, "L'histoire et la géographie de la région de Smyrne entre les deux occupations turques (1081–1317), particulièrement au XIIIe siècle," *TM* 1 (1965): 2–204, esp. 17ff; M. Angold, *A Byzantine Government in Exile: Government and Society under the Lascarids of Nicaea (1204–1261)* (Oxford, 1975), 102ff; J. Lefort, "Tableau de la Bithynie au XIIIe siècle," in *The Ottoman Empire, 1300–1389*, ed. E. Zachariadou (Rethymnon, 1993), 101–17; and Matschke, "Commerce."

⁴⁸ MM 4:94 (1274), 112–13, 122–24, and A. Dunn, "The Exploitation and Control of Woodland and Scrubland in the Byzantine World," *BMGS* 16 (1992): 235–98, esp. 277.

⁴⁹ P. Schreiner, "Die Produkte der byzantinischen Landwirtschaft nach den Quellen des 13.–15. Jh.," *BHR* 10 (1982): 93.

⁵⁰ See MM 4:1–4, 26–28, 242–44, 48–51.

⁵¹ See below, 348, and Matschke, "Commerce."

again restored or planted by the monks. He confirmed to them the full ownership of everything they possessed or might acquire: an important incentive to further investment. Gregoras mentions the grant of estates to monasteries in the context of John Vatatzes' agrarian reforms.⁵² As a result of the efforts of the Nicene emperors, there was a surplus of wheat, barley, wine, and oil and large numbers of flocks; grain was stored in great warehouses and exported to the Seljuks.

If grain was an important commodity and one that, under the Laskarids, was plentiful, the cash crops of the area were, as they had always been, olive oil and wine. Olive trees seem to have been owned by the great majority of the inhabitants of the hilly region behind Smyrna, both peasants and landlords, although it has been observed that olive trees, vineyards, and fruit trees were much more the domain of small peasant proprietors than of the great landlords who had the grain-producing estates.⁵³ Acts of sale and donation involve olive trees in significant numbers: occasionally we find a sale or donation of two or three trees, but more frequently there are ten, twenty, thirty, or forty trees. Since ten to twelve olive trees sufficed for the needs of a household,⁵⁴ the donors or sellers, who included peasants and small and large landowners, clearly owned olive trees in numbers that far exceeded the needs of domestic consumption.⁵⁵ The small monastery of St. Panteleemon had 164 olive trees, which later became part of a *metochion* of Lembiotissa. The *metochion* also included a small parcel of arable land (more than 40 modioi), 1 modios of vineyard, one ox, one donkey, fruit trees, and thirty beehives.⁵⁶ Clearly, there was production for the market, both by the peasantry and by landlords.

The prosperity of Byzantine Asia Minor began to decline in the late thirteenth century. It had been partly based on a population increase, which was hard to sustain in the troubled political times of the 1280s, and later, especially after the battle of Baphheus, in 1302. Already in the 1260s, the inhabitants of Paphlagonia and other areas of Asia Minor claimed a shortage of cash when Michael VIII imposed punitive taxes on them, and the correspondence of Gregory of Cyprus shows Asia Minor to have been a troubled province.⁵⁷ In the fourteenth century, there was still export of wine from Bithynia,⁵⁸ but the level of agricultural production must have fallen off very considerably. There is evidence, at the same time, of relative prosperity in Turkish-occupied Asia Minor, an indication of the importance of peace.⁵⁹

⁵² MM 4:1–4.

⁵³ Angold, *Lascarids*, 103.

⁵⁴ M. Kaplan, *Les Hommes et la terre à Byzance du VI^e au XI^e siècle: Propriété et exploitation du sol* (Paris, 1982), 505 n. 114.

⁵⁵ In one case, a family group donates to Lembiotissa seven out of the fourteen trees it owned: MM 4:136–37 (1279).

⁵⁶ MM 4:56–57.

⁵⁷ Pachymeres, ed. Failler, 293.

⁵⁸ See Matschke, "Commerce."

⁵⁹ E. A. Zachariadou, "Notes sur la population de l'Asie Mineure turque au XIV^e siècle," *ByzF* 12 (1987): 228ff.

The Despotate of the Morea

This is an area for which we possess a fair amount of data regarding agricultural production.⁶⁰ The survival of better source material gives us much more information for the territories of the principality of Achaia, which kept dwindling in our period.⁶¹ While the economy of Frankish possessions falls outside our purview, reference will occasionally be made to these areas, which, in terms of products, were probably not unlike the despotate of the Morea.

While wheat was produced in, and even exported from, the despotate of the Morea, this was not primarily a grain-producing region.⁶² The most important agricultural products in which it specialized were wine, including the already famous Malvasia wine, and olive oil, produced in considerable quantities. In the twelfth century, the southern Peloponnese was said to be among the greatest producers of olive oil in the world.⁶³ The cultivation of the vine was important in areas around Corinth and Patras, among others, and currants were an export item. The *paroikoi* of Latin-held areas paid a special tax, called *mostoforia*, on the production of must or young wine.⁶⁴ Fruit trees and the products of the forest, including wood for construction, are also mentioned. In the early fifteenth century, George Gemistos Plethon speaks of the despotate of the Morea as a primarily agricultural land, where the great majority of the inhabitants engaged in agriculture and some in animal husbandry.⁶⁵

Industrial crops were cultivated in the despotate of the Morea, as in the Frankish possessions. They were primarily products connected with the manufacturing of textiles. Raw silk was produced in the Morea, as it had been throughout the Byzantine period, in what seem to be important quantities. From the documentation regarding the Frankish possessions, it appears that mulberry trees were grown in much of the country but, surprisingly, not around Corinth, which in the twelfth century had been

⁶⁰ On the Peloponnese, see P. Lemerle, "Une province byzantine: Le Péloponnèse," *Byzantion* 21 (1951): 352–53; I. Medvedev, *Mistra: Ocherki istorii i kul'tury pozdnevizantiiskogo goroda* (Leningrad, 1973), 81–94; D. A. Zakythinos, *Le despotat grec de Morée*, vol. 2, *Vie et institutions*, 2 vols. (Athens, 1953), ed. and rev. C. Maltézou (London, 1975).

⁶¹ J. Longnon and P. Topping, *Documents sur le régime des terres dans la principauté de Morée au XIVe siècle* (Paris, 1969), is a major source, covering the 14th century. See also P. Topping, "Le régime agraire dans le Péloponnèse latin au XIVe siècle," *L'Hellénisme contemporain*, 2d ser., 10 (1956): 255–95; cf. D. Jacoby, "Les états latins en Romanie: Phénomènes sociaux et économiques (1204–1350 environ)," *XVe Congrès international d'études byzantines: Rapports* (Athens, 1976), 11ff.

⁶² The documents from the Latin part of the Morea mention, along with wheat, barley, oats, and millet (see, e.g., Longnon and Topping, *Documents*, 210ff).

⁶³ H. Lamprecht, *Untersuchungen über einige englische Chronisten des zwölften und des beginnenden dreizehnten Jahrhunderts* (Torgau, 1937), 117; *ODB*, s.v. "Olive." On Malvasia wine and generally on the crops of the hinterland of Monemvasia, see H. Kalligas, "Monemvasia, Seventh–Fifteenth Centuries," *EHB* 872–75. For Malvasia wine produced in and exported from Crete, see Zakythinos, *Despotat*, 2:173, 249–50.

⁶⁴ Longnon and Topping, *Documents*, 271.

⁶⁵ S. Lambros, *Παλαιολογία καὶ Πελοποννησιακά*, 4 vols. (Athens, 1912–30), 3:251; for details, see Zakythinos, *Despotat*, 2:245ff.

a major center of silk production and manufacturing.⁶⁶ D. Jacoby connects the interruption of silk growing in the countryside around Corinth to the insecurity resulting from Turkish raids after 1327. In the Frankish areas, peasants owned mulberry trees, but there is also evidence of seigneurial workshops in villages, presumably for rearing cocoons and reeling the silk.⁶⁷

The production of raw silk in the despotate of the Morea is mentioned throughout the period. In 1296 a Greek from Great Arachova sold silk at the fair of Vervena, between Andritsaina and Karytaina. He was a member of the well-known Greek family of Crocodiloi or Arcocondiloi, an aristocratic family that produced a number of officials in the fourteenth century, and whose members had extensive landed possessions. In 1381 John Laskaris Kalopheros appeared in Modon with 2,773 light pounds of raw silk, which may have come from the domains of his father-in-law, Erard III Le Maure, lord of Arkadia.⁶⁸ The despots of the Morea exported raw silk well into the fifteenth century, placing a special tax on it.⁶⁹

Raw materials for other textiles were also produced in the Morea: wool, cotton, and linen are mentioned by Plethon in the first half of the fifteenth century.⁷⁰ Connected to the production of textiles was the collection of dyeing agents: purple and kermes (*prinokokkion*, *grana*, cochineal, a parasite of the holly oak, which was collected in the plain of Helos and undoubtedly elsewhere). Acorns, useful for the tanning industry, were collected and exported.⁷¹ These activities, involving the by-products of woods and scrubland, must have been important, for they formed the object of imperial monopolies and imperial grants. In 1301 Andronikos II gave to the metropolis of Monemvasia, in the southern Peloponnese, a church, with its *paroikoi* and *autourgia*, including an oakwood and the right to the acorns. The church was also granted the right to sell the *prinokokkion* collected by its *paroikoi* on its own lands, while the *prinokokkion* collected by the same *paroikoi* on state oakwoods still belonged to the state.⁷²

The Byzantine Peloponnese may have enjoyed a modest prosperity in the thirteenth and the first half of the fourteenth century. In special cases, that is, in Monemvasia, prosperity derived from trade.⁷³ In the peninsula as a whole, it must have derived from

⁶⁶ D. Jacoby, "Silk Production in the Frankish Peloponnese: The Evidence of Fourteenth-Century Surveys and Reports," in *Travellers and Officials in the Peloponnese: Descriptions—Reporters—Statistics*, ed. H. Kalligas (Monemvasia, 1994), 41–61.

⁶⁷ *Ibid.*, 51–52. For the involvement of peasants in the production and cultivation of cocoons and raw silk, cf. C. Hodgetts, "Venetian Officials and Greek Peasantry in the Fourteenth Century," in *Kathegetria: Essays Presented to Joan Hussey for Her 80th Birthday* (Camberley, 1988), 481–99.

⁶⁸ Zakythinos, *Despotat*, 2:253–54, and 1:65. Cf. Matschke, "Commerce," 764; Jacoby, "Silk Production."

⁶⁹ See the privileges of the Ragusan merchants with regard to the duties on silk, Lambros, *Παλαιολόγεια καὶ Πελοποννησιακά*, 4:29 (1431).

⁷⁰ *Ibid.*, 3:263.

⁷¹ Zakythinos, *Despotat*, 2:247; W. Heyd, *Histoire du commerce du Levant au moyen âge*, 2d ed., 2 vols. (Leipzig, 1936), 2:607ff.

⁷² Dunn, "Exploitation," 275; on *prinokokkion*, see *ibid.*, 290–91. For the privilege, see Zepos, *Jus*, 1:526–27.

⁷³ See Matschke, "Commerce," and Kalligas, "Monemvasia."

agriculture. Inscriptions from churches in the Mani, an area where the main, almost the only, crop is olives, show that peasants were able to contribute a little money and resources to the building of churches. The sums were minimal, ranging from $\frac{1}{4}$ of a nomisma to 1 nomisma (with 8 nomismata from the *anagnostes*), but at least the peasants could afford them. In a church in the Mesa Mani, the inscription lists donations in kind. They consist of olive trees ($\frac{1}{3}$ –4 trees), vegetable plots (of $\frac{1}{4}$ modios), tiny plots of arable ($\frac{1}{4}$ – $\frac{1}{2}$ modios), and a threshing floor.⁷⁴

Brief global views of the agrarian economy of the despotate in the fifteenth century are provided by the inquest of the Venetian Dolfen Venier into the resources of the area (1422) and by the writings of Plethon in the early fifteenth century. In 1422 the Venetians heard that the Morea produced silk, honey, wax, grain, fowl, and raisins, and that it had silver and lead mines. These resources were still not sufficient, in the eyes of the Signoria, for it to accept the Morea, which was offered them by the emperor and the despot.⁷⁵ Later in the century, Plethon singled out cotton as an important product, but also spoke of wool, linen, and flax.⁷⁶ The specialties of the area, both industrial products and olive oil, wine, and raisins, were the important items of export to Italy.

The agricultural production of the Morea was to some degree geared to the needs of the Italian trade network, which exported raw materials and imported manufactured cloth. Both Bessarion and Plethon railed against this situation; I think it very likely that the demands of Italian trade had, to some degree that is difficult to quantify, influenced agricultural production by promoting a certain orientation toward industrial crops.⁷⁷ It goes without saying that this production served the needs of western European textile manufacturing, while that of the Peloponnese itself had declined, and had probably become limited to the household production of cheap items in the villages.

Did prosperity decline in the second half of the fourteenth century? Demetrios Kydones wrote, sometime between 1383 and 1387, that the Peloponnese was a poor land, hardly able to feed its inhabitants.⁷⁸ In any case, exports of wheat do not necessarily mean that the entire population is well fed; they can mean that the population is squeezed. Plethon spoke against the export of grain, saying that the inhabitants themselves faced shortages.

⁷⁴ Kalopissi-Verti, *Dedicatory Inscriptions*, nos. 19 (1265), 21a (1278), and cf. no. 20.

⁷⁵ Marin Sanuto, *Vitae Ducum Venetorum*, in *Rerum Italicarum Scriptores*, ed. L. A. Muratori (Milan, 1733), 22:943.

⁷⁶ Lambros, *Παλαιολόγια καὶ Πελοποννησιακά*, 3:263.

⁷⁷ Plethon: Lambros, *Παλαιολόγια καὶ Πελοποννησιακά*, 3:263; Bessarion: *ibid.*, 4:41 (against the export of grain). Cf. Jacoby, "Silk Production," 58–59, who argues that the Italians were responsible for a more market-oriented approach to the production of certain commodities, including silk. On the similar, but much greater, effects of the Italian trade system on the agricultural production of Syria, see E. Ashtor, *Levant Trade in the Later Middle Ages* (Princeton, 1983), *passim*.

⁷⁸ *Démétrius Cydonès, Correspondance*, ed. G. Cammelli (Paris, 1930), 85; Lemerle, "Une province byzantine," 252–53, is of the opinion that the Peloponnese was a poor part of the Byzantine Empire.

Epiros and Thessaly

These areas were linked by sometimes common political developments and also by the fact that the ports of Epiros served as outlets for the grain of Thessaly.⁷⁹ Having different geographic features from each other, they produced different crops. Thessaly, with its great plains, was an important center of wheat production; its wheat was marketed from Demetrias, Halmyros,⁸⁰ and Pteleon⁸¹ and also from Arta, from which it was exported to Italy and Ragusa. Vine cultivation also seems to have been important, in the area around Volos for example. Thessaly was a land where the large estate was predominant, although we do not have much information about the details of the organization of agricultural activity.⁸² We do know, however, that, when Nicholas Angelos Komnenos Maliasinos and his wife, Anna Doukaina Komnene Palaiologina, the niece of Michael VIII, founded the convent of Nea Petra, they bought land from Michael Archontitzes, land whose yearly taxes the inhabitants of the village of Dryanoubaina agreed to pay, so that the convent would get it free of fiscal burdens. A little later, they acquired the vineyards and lands of peasants who had possessions in the vicinity, and who sold at a very low price, disguising part of the sale as donation.⁸³ While the sellers invoked their poverty as the reason for selling their lands, and at low prices, in 1272 Michael VIII confirmed the possessions of the monastery of Makrinitissa, also founded by Nicholas Maliasinos. The monastery had, in Demetrias, arable land, vineyards, pasture land, peasants, boats for fishing as well as the fishermen who owned them, and so on. We see here the transformation of small landholdings into estates.⁸⁴

In Epiros there were vineyards near Ioannina and Arta.⁸⁵ In the south, in Aetolia, silk was produced in Naupaktos, at least in the early thirteenth century. The same source praises the fish and citrus fruit of the area.⁸⁶ Animal husbandry was particularly well developed in Epiros. When, in 1336, Andronikos III attacked the Albanians in the mountainous areas around Berat and Kanina, going as far as Durrazzo, his booty is said to have included 300,000 oxen (a huge number for such terrain), 5,000 horses,

⁷⁹ E. A. Zachariadou, "Παραγωγή και εμπόριο στο δεσποτάτο της Ηπείρου," in *Πρακτικά Διεθνούς Συμποσίου για τό Δεσποτάτο της Ηπείρου* (Arta, 1992), 87–93, esp. 89–90.

⁸⁰ See, for example, M. Balard, *La Romanie génoise, XIIe–début du XVe siècle*, 2 vols. (Rome, 1978), 1:164 n. 212.

⁸¹ B. Ferjančić, *Tesalija u XIII i XIV veku* (Belgrade, 1974), 277–78.

⁸² On Thessaly, see Ferjančić, *Tesalija*, and idem, "Posedi poroditse Maliasina u Tesaliji," *ZRV* 9 (1966): 33–48; I. Sokolov, "Krupnye i melkie vlasteli v Fessalii epokhi Paleologov," *VizVrem* 24 (1923–26): 35–44.

⁸³ MM 4:391–99, 399–402, 402–4, 404–6, 407–9, 410–11, 412–14 (1271).

⁸⁴ MM 4:330–32 (1272), and cf. 333–36 (1274), which mentions two mills as well. On Thessaly, see Ostrogorskij, *Féodalité*, 93–99.

⁸⁵ The acts of Demetrios Chomatianos and John Apokaukos, in the early 13th century, have frequent mentions of vineyards and, of course, of arable land. See, for example, A. Papadopoulos-Kerameus, "Συνοδικά γράμματα Ἰωάννου τοῦ Ἀποκαύκου," *Byzantis* 1 (1909): 28–30.

⁸⁶ N. Bees, "Unedierte Shriftstücke aus der Kanzlei des Johannes Apokaukos des Metropolitens von Naupaktos (in Aetolien)," *BNJ* 21 (1971–76): no. 67, pp. 124–25.

and 1,200,000 sheep.⁸⁷ As a para-agricultural activity, one might mention the production of salt in Naupaktos and elsewhere.⁸⁸ As is the case with Thessaly, the structure of agricultural production in Epiros is not easy to study in detail because of lack of documentation. The extant thirteenth-century sources give the impression that this, and western Greece generally, was an area where small independent landholders, whether peasants or others, with moderate means, formed an important part of the population. Such people appear not infrequently in the courts of Chomatianos and Apokaukos. Apokaukos mentions peasants who move with their flocks and carry flour with them, and peasants who are in despair because some sickness has struck their oxen and they cannot thresh their grain.⁸⁹

Macedonia and Thrace

The best-studied (and easiest to study) region in the Palaiologan period is Macedonia. This is primarily due to the wealth of material that may be found in the archives of the monasteries of Mount Athos. The period of Latin rule is very poorly represented, and little can be said about it. On the other hand, the decisions of Demetrios Chomatianos, archbishop of Ohrid, provide some information on western Macedonia in the early thirteenth century. The economy of Macedonia and Thrace was relatively well articulated during the first eighty years of Palaiologan rule. There was still relative security, despite periodic invasions and the first civil war. The roads were open, toward both Constantinople and Belgrade, as were communications by sea, and cities were connected to their agricultural hinterland.⁹⁰ In the 1340s and after, insecurity became endemic because of the great civil war and the Serbian and Ottoman invasions. Land communications between Macedonia and Thrace and Constantinople were interrupted, and the cities were cut off from their hinterland for long periods of time. Demographic decline, in part due to the bubonic plague, had adverse effects as well.

The main crop of Macedonia and Thrace was cereals. There was wheat, summer wheat, and barley. Grains for fodder (vetch, rye, millet) were also cultivated.⁹¹ Millet was used mostly for animals, although poor people also ate it. The best wheat of the

⁸⁷ *Ioannis Cantacuzeni Historiarum libri quattuor*, ed. L. Schopen (Bonn, 1828–32), 1:497–98 (hereafter Kantakouzenos); A. Laiou, “In the Medieval Balkans: Economic Pressures and Conflicts in the Fourteenth Century,” in eadem, *Gender, Society and Economic Life in Byzantium* (Aldershot, 1992), art. 9, p. 149.

⁸⁸ Zachariadou, “Παραγωγή,” 91. For the production of wheat, wine, cheese, and fruit, see S. C. Estopañan, *Bisancio y España: El legado de la basillisa Maria y de los despotas Thomas y Esaú de Joannina* (Barcelona, 1943), 2: § XII.

⁸⁹ Bees, “Unedierte Schriftstücke,” no. 107 (1218–19); S. Pétridès, “Jean Apokaukos, Lettres et autres documents inédits,” *IRAIK* 14 (1909): 75–76; D. Angelov, “Prinos kum narodnostinite i pozemelni otnošeniia v Makedonija (Epirskija Despotat) prez purvata cetrvurt na XIII vek,” *Izvestija na kamarata na narodnata kultura, serija: Humanitarni nauki* 4.3 (1947): 3–46. Ostrogorskij, *Féodalité*, 88ff, stresses the importance of *pronoia*-holders, with dependent peasants, in the Despotate of Epiros.

⁹⁰ Laiou, “The Economy of Byzantine Macedonia.”

⁹¹ Laiou-Thomadakis, *Peasant Society*, 26ff; cf. Lefort, “Rural Economy,” 244ff.

empire, according to Pegolotti, was the wheat of Rhaidestos, that is to say, of the Thracian hinterland.⁹² Legumes were produced as part of the alternation of cultures. Vineyards were widespread, in both the Chalkidike and the theme of Strymon.⁹³

Fruit trees are widely attested: fig trees, pear trees, walnut, almond, and cherry trees, as well as mulberry trees, perhaps attesting to the production of raw silk, although in quantities that cannot have been great. Considerable numbers of fruit trees grew in the fertile Strymon valley. Olive trees did not grow north of the Chalkidike, and the number of such trees mentioned even in that peninsula is small. Rice, which was cultivated in Crete in the fourteenth century, is not attested in Thrace or Macedonia. Linen, cotton, and flax are attested, but it is not possible to estimate how important their production was. Cotton was exported from Thessalonike during the first decade of the fifteenth century.⁹⁴ Salt pans existed in Macedonia and Thrace.

While bee-keeping and fishing⁹⁵ were supplementary occupations of the inhabitants, the raising of flocks and cattle was an important activity. Oxen and buffaloes were used for agriculture, and they were owned by both landlords and peasants. We also find cows, mules, and donkeys. Large-scale rearing and ownership of cattle and horses seems to have taken place on the estates of great landlords.⁹⁶ Peasant households also owned pigs, sheep, and goats. In some villages, animal husbandry seems to have been an important activity. Such was the case in villages of the eastern Chalkidike, especially in the interior. Thus the village of Gomatou had 1,193 sheep in 1300–1301, and Selada had more than 500 sheep and goats. The peninsula of Sithonia seems to have had winter pastures. In the area close to Mount Pangaion, peasants raised cattle near the plains and sheep closer to the mountain. Many poorer peasants were exclusively employed in animal husbandry.⁹⁷ The importance of animal husbandry is attested by the high value placed on meadow lands that produced fodder for the winter. In the eleventh century, as in the thirteenth, irrigated meadowland (λιβάδιον χορτοκοπούμενον, ὑποπότιμος ὁλοκαιρινός) was more valuable than first-quality arable land.⁹⁸

The products of woods and forests were important for household consumption (firewood), for the feeding of pigs, and for the secondary sector of agricultural activity: the felling of timber and the collection of raw materials for tanning, dyeing, and medicinal purposes. It has been observed that the products of woods and scrublands were eminently tradable, and indeed trade in firewood and timber is attested on Mount

⁹² F. Balducci Pegolotti, *La pratica della mercatura*, ed. A. A. Evans (Cambridge, Mass., 1936), 42.

⁹³ N. K. Kondov, "Produktionsorganisatorische Verschiebungen bei dem Weinbau in der ersten Hälfte des XIV. Jahrhunderts im Gebiet des unteren Strymons," *EtBalk* 9.1 (1973): 67–76; Schreiner, "Die Produkte," 88–95.

⁹⁴ A. Laiou, "Η Θεσσαλονίκη, η ενδοχώρα της και ο οικονομικός της χώρος στην εποχή των Παλαιολόγων," *Βυζαντινή Μακεδονία, 324–1430* (Thessalonike, 1995), 190.

⁹⁵ See, for example, *Kutlumis*, nos. 43, 46; *Lavra*, 4:163; *Zographou*, no. 29.

⁹⁶ See below, 348–49.

⁹⁷ B. Ferjančić, "Stočarstvo na posedima svetogorskih manastira u srednjem veku" *ZRVI* 32 (1993): 35–127.

⁹⁸ See Table 2, below. On the 11th century, see Oikonomidès, "Role of the State," 973ff.

Athos from the first centuries of its history. In the fourteenth century, some timber was exported to the West.⁹⁹

The Organization of Production

The developments of the twelfth century¹⁰⁰ obtain in the subsequent period as well. In all the Byzantine regions, except possibly for Epiros and western Greece, the large estate—lay and, increasingly, ecclesiastical—plays an important role. Small independent peasant holdings existed but appear to have had difficulty surviving, while the residents of cities also held land in the countryside, usually rented out or cultivated by agricultural laborers. In Macedonia and Thrace, the areas richest in cereals, the estate, cultivated by *paroikoi*, was a dominant form of organization of production and will be discussed first. In this period, we have a wealth of documentation, including *praktika*, census records that list the holdings of a landlord, lay or ecclesiastical, in detail; the *praktika* also list the properties held by and dues paid by the *paroikoi*. By far the fullest documentation comes from the archives of Mount Athos and refers to Macedonia and the island of Lemnos. For that reason, most studies have focused on Macedonia; the existence of large amounts of information has made it possible for scholars to undertake quantitative analysis of the population, the production, the crop yields, the size of holdings, the tax rates, and the revenues of both large and medium-sized estates. However, scholars are not always in agreement, and a number of questions remain open. Given the state of the documentation, Macedonia will necessarily remain the focus of the investigation here, although information from other areas will be used to clarify and corroborate arguments, or to show that different possibilities and configurations existed.

The question of estate organization of production will be introduced through the data offered by the *praktikon* for the village Mamitzon near Constantinople. In 1322, two-thirds of the village was granted by Andronikos II to a hospice founded in Constantinople by Stefan Uroš II, while the remaining third was to be given to Hilandar. A document dated 1323 lists the revenues of this third portion of the village.¹⁰¹ There were 36 peasant households, which paid a total base tax of 66 hyperpyra (see Table 1). Supplementary taxes are also listed. One-third of the revenues of two winter water mills and half a windmill yielded 10 hyperpyra; the rent of a garden of 8 modioi amounted to 4 hyperpyra, and one-third of a meadow yielded 1 hyperpyron. The third portion of another meadow yielded 3 hyperpyra. All of the peasant households possessed some arable land, whether from hereditary possession (no. 1) or from dowry (no. 10), or ἀπὸ (διὰ) παραδόσεως. It is clear that a sort of distribution had taken place, in the course of which some peasants kept a part of the land they were already holding

⁹⁹ Dunn, "Exploitation," esp. 255. For western Macedonia, see V. Kravari, *Villes et villages de Macédoine occidentale* (Paris, 1989), 28–29.

¹⁰⁰ Lefort, "Rural Economy."

¹⁰¹ *Chilandar*, nos. 82 (1322), 92 (1323), pp. 194–98. On this, see Ostrogorskij, *Praktika*, 317–18.

(nos. 13, 19, 21, 29), while others were given land. In one case, no. 31, a peasant was granted 15 modioi of land "from that which he had cleared." The peasants also held vineyards, gardens, and threshing grounds.

Of the 36 households, 22 had oxen: 17 had one pair each, and 5 had a single ox each. The plots of arable land held by the *paroikoi* had some connection to the ownership of oxen, but certainly not a clear or consistent one: the household of Theotokios Tzalkanakas, who had no oxen but held 80 modioi, is an outlier, as is that, at the other end, of George, son of Constantine Zymaras, who had a pair of oxen but only 20 modioi of arable (nos. 2 and 29). On the average, the households without oxen held 22.6 modioi of arable, those with one ox held 70 modioi, and, surprisingly, those with a yoke of oxen held almost the same quantity on average (67 modioi).

After the list of the households of the *paroikoi*, with the tax they paid to the landlord, the *praktikon* proceeds to the arable land of the landlord. What is unique is that it also mentions the terms on which the domain land is to be cultivated. There are 600 modioi of "best-quality land, which is to be cultivated "through the corvée (*angareia*) of the *paroikoi*." Its revenues are 24 hyperpyra, that is to say, 1 hyperpyron per 25 modioi. The rest of the land, 1,500 modioi, is ὑπόμορτος γῆ, that is, cultivated by sharecroppers. Its revenues are 30 hyperpyra, which comes to 1 hyperpyron per 50 modioi. Both of these figures represent fiscal revenues: they are the tax that this land would have paid to the state, which is now yielded to the landlord. The real revenues, which would come from the production, are not mentioned here, or in any other *praktikon*. While the rate of 1 hyperpyron per 50 modioi is normal for the fourteenth century, it is extremely rare to find two different rates, as we have here. Presumably the "best-quality land" is taxed differently not only because it is best quality, but also because, being cultivated by corvée labor, it yields higher revenues.

We thus have three different forms of exploitation of the land and distribution of the surplus. The peasants own land, and they pay a tax on their possessions, presumably at the rates that have been statistically established as common in Macedonia.¹⁰² That tax goes to the landlord, who has no other claim on the production of the *paroikoi*. Domanial land is larger than that held by the peasants (2,100 modioi as against 1,812 modioi). Of that land, 29% is cultivated by the corvée labor of the *paroikoi* and is thus domanial land under direct exploitation. The rest is rented out—to the same *paroikoi* or to others? The landlord would keep all of the revenues of the first group of lands and a share of the production of the second group. How does this compare to the earlier situation, how much corvée labor was involved, and how much of the share of the produce did the landlord receive in a sharecropping arrangement? Were the arrangements implied by the *praktikon* of Mamitzon typical, even though the clear division between land cultivated by labor services and land under sharecropping is not found elsewhere?

The interpretation of the *praktikon* of Mamitzon is helped, to some extent, by the

¹⁰² Lefort, "Fiscalité."

Table 1
The *Paroikoi* of Mamitzon

Household	Lines	People	Houses	<i>Zeugarion</i>	Vineyard (modioi)	<i>Ampelotopion</i> (modioi)	Land (modioi)
1	18–22	3	1	1	2.25		50
2	22–23	2	1	—	—		80
3	23–26	4	1	—	—		17
4	26–30	5	3	1	2		104
5	30–33	6	1	0.5	1		60
6	33–36	4	1	—	1.15		37
7	36–38	2	1	—	—		15
8	38–41	5	2	1	5		74
9	41–44	2	2	1	2.15		55
10	44–48	2	1	1	1.33		55
11	48–51	2	1	—	2	1.5	16
12	51–53	3	1	0.5	1.5		27
13	53–57	8	2	1	2.33		85
14	57–62	2	1	0.5	0.5		120
15	62–64	4	1	1	1	1.5	94
16	64–66	4	1	—	—		15
17	66–69	5	2	0.5	4		74
18	69–70	1	1	—	—		8
19	70–72	3	1	—	—		33
20	72–75	4	1	1	1		30
21	75–77	2	1	^(a)	1.33		25
22	77–79	2	1	—	1.33		10
23	79–82	3	2	1	3.33		81
24	82–86	6	2	1	8		70
25	86–89	4	1	1	4.33	1	50
26	90–91	3	1	—	—		17
27	91–93	3	1	—	2		14
28	94–97	5	1	1	3.25		76
29	97–100	4	1	1	1.66		20
30 ^b	100–03	3	1	1	4		110
31	103–05	3	1	—	—		15
32	105–12	5	2	1	—		80
33	112–18	3	2	1	3	0.67	50
34	120–25	3	1	1	1		60.5
35	125–27	4	1	0.5	—		70
36	127–29	3	1	—	—		15
Total		127	46	19.5 ^c	60.44		1,812.5

continued

Table 1
(continued)

<i>Telos</i> (hyperpyra)	Cows	<i>Alonotopion</i>	<i>Esokepion</i> (modioi)	<i>Kepotopion</i> (modioi)	Donkeys	<i>Esoperibolion</i>
2						
2.5						
0.5	1					
3	2	+	2	0.25		
2						
1.33						
0.5					1	
3.5	1		0.1			
2	1					
2		+				
1						
1						
3	1			0.25		
3						
3	1					
0.5						
3						
0.25						
1						
1						
1						
0.5						
3	1					
4				0.25		
2.5	1					
0.5						
1						
2.5			0.075			
1						
4						0.2
0.5	1				1	
2.5				0.25		
2						
2						
2						
0.5						
65.58						

Note: A first version of this table was made by S. Dmitriev, in seminar.

^a One horse. ^b He has 6 mills. ^c 17 *zeugaria* and 5 single oxen.

Ratios: Oxen per household: 1:1; arable land of *paroikoi* per ox: 46 modioi: 1.

information furnished by a curious fiscal document, the so-called *Apokope ton psomion*, which seems to have originated in Cyprus in 1232.¹⁰³ At the time, Cyprus was firmly under Latin occupation, but undoubtedly this document incorporates earlier practices. The *Apokope* establishes, like earlier fiscal documents, the value of land according to quality. The valuation is different from that of the eleventh century, since the best-quality land is valued at $1\frac{3}{4}$ modioi per hyperpyron, not 1 modios per hyperpyron. First-quality land is taxed at the rate of 1 hyperpyron per 48 modioi, not very different, proportionately, from the tax of the eleventh century, which was an *ad valorem* tax of $\frac{1}{24}$ of the value of the land, that is, 1 nomisma for 24 modioi of first-quality land (see Table 2A). It will be noted that we are very close to the tax of 1 hyperpyron per 50 modioi that was common in the fourteenth century, but here it affects only first-quality land. The document also places a value on the peasants, according to the number of oxen they possess; here the value is higher than in the eleventh century—a result of the devaluation of the coinage, or a particularity of the locality. More interestingly, the document instructs the tax official to proceed to an *hikanosis*: the peasants are registered, and then the land of the unit is registered; the peasants are given land according to their labor force, and the remaining land is evaluated according to its quality.

An estate, according to the *Apokope*, consists, basically, of the workforce and the arable land, although sheep, vineyards, and olive trees are also mentioned. Each peasant household has its own land, granted it by the fiscal official from the totality of the land of the estate. The bulk of the land remains in the hands of the landlord, that is, it is domanial land. The size of the peasant plots is given, for the first time in a semi-official fiscal document: a *pezos* (who owns no oxen) is to be given 20 modioi of land, a peasant with one ox gets 30 modioi, and a peasant with a pair of oxen gets 40 modioi. The figures differ significantly from those of the *praktikon* of Mamitzon: only the 20 modioi of a *pezos* are close to the average holding of a peasant with no oxen in Mamitzon, while the figures for the peasants with one or two oxen are significantly lower than those we encounter in Mamitzon. This, however, is quite to be expected, for local variations are unavoidable, and, as we shall see below, even within Macedonia the holdings of peasants varied widely. What is more important is the principle that underlies the *Apokope*. Surely, if a peasant could cultivate 20 modioi of land without any animals, a *zeugaratos* was capable of cultivating much more than the 40 modioi allotted to him. Therefore, the peasants were also expected to cultivate the domanial land. At the end

¹⁰³ It is published, though not very well, by Th. Uspenskii, "Vizantiiskie zemlemery," *Trudy VI. Archeologicheskogo s'ezda v Odesse* (Odessa, 1888), 2:302–8, and S. Lambros, "Κυπριακὰ καὶ ἄλλα ἔγγραφα ἐκ τοῦ Παλατίνου κώδικος 367 τῆς βιβλιοθήκης τοῦ Βατικανοῦ," *Νέος Ἑλλ.* 15 (1921): 345–47. For comments, see N. Svoronos, *Recherches sur le cadastre byzantin et la fiscalité aux XIe et XIIe siècles: Le cadastre de Thèbes* (Paris, 1959), 125–26; F. Dölger, *Beiträge zur Geschichte der byzantinischen Finanzverwaltung, besonders des 10. und 11. Jahrhunderts* (Leipzig, 1927), 56; E. Schilbach, *Byzantinische Metrologie* (Munich, 1970), 275–77; Lefort, "Fiscalité," 320–21; also J. W. Nesbitt, "Mechanisms of Agricultural Production on Estates of the Byzantine Praktika" (University of Wisconsin, Ph.D. diss., 1972), 90ff, and Oikonomides, "Role of the State," 955, 1011ff. *Apokope* can mean a payment, the determination of the value of land or of a unit of production, payment according to contract for the use of land or pasture land: Sophocles, *Istor. Lex. s.v.*, Dölger, *BZ* 29 (1929–30): 335; Longnon and Topping, *Documents*, 273.

Table 2A
Value and Taxation of Land

	Value (per modios)	Tax (per modios)	Tax as a percentage of value
First-quality land			
11th century	1.00 nomisma	$\frac{1}{24}$ nomisma	4.20
13th century	0.57 hyperpyron	$\frac{1}{48}$ nomisma	3.65
Second-quality land			
11th century	0.50 nomisma	$\frac{1}{48}$ nomisma	4.20
13th century	0.28 hyperpyron	$\frac{1}{100}$ hyperpyron	3.60
Third-quality land			
11th century	0.33 nomisma	$\frac{1}{72}$ nomisma	4.20
13th century	0.14 hyperpyron	?	?
Meadow land (irrigated)			
11th century	3.00 nomismata	$\frac{1}{8}$ nomisma	4.20
13th century	?	$\frac{1}{36}$ hyperpyron ¹	?

Table 2B
Value of *Paroikoi*

	<i>Zeugaratos</i>	<i>Boidatos</i>	<i>Akteimon</i> or <i>pezos</i>
11th century	24 nomismata	12 nomismata	6 nomismata
13th century	60 hyperpyra	40 hyperpyra	20 hyperpyra

Distributed land per category of *paroikos*

11th century			
13th century	40 modioi	30 modioi	20 modioi

Source: Eleventh-century fiscal document: J. Lefort, *Géométries du Fisc byzantin* (Paris, 1991), 62; *Apokope*: Uspenskii, "Vizantiiskie zemlemery."

¹Or: $\frac{1}{30}$, according to E. Schilbach, *Byzantinische Metrologie* (Munich, 1970), 255.

of the document there is an example of a fictitious estate, which serves to illustrate the manner of calculating the taxes due. The domanial land of this estate consists of 897 modioi of arable land; since the example also places on the estate 11.5 *zeugaratoi*, each one of them would cultivate 78 modioi of domanial land, under conditions that are not specified—that is, it is not stated whether this would be by corvée labor or sharecropping, nor, it should be said, is it specifically stated that the domanial land would be cultivated only by these 11.5 *zeugaratoi*. Together with his own land, a *zeugaratos* would thus cultivate a total of 119 modioi.¹⁰⁴ As an exercise, we may take the *zeugaratoi* of Mamitzon. They formed almost half the population of *paroikoi*; if they cultivated half the domanial land, on average they would cultivate 62 modioi of domain land (both by corvée labor and by sharecropping) and a total of 129 modioi, including their own.

How much land a peasant was able to cultivate is different from how much he did cultivate and how much he owned. There are no firm figures as to how much land a *zeugaratos* is capable of cultivating in one year. There are estimates of 83–213 modioi, depending on the quality of the soil.¹⁰⁵ That the peasant holding and the land cultivated by a peasant household are two different things is, of course, self-evident in the many villages of Macedonia, where the households of *paroikoi* are not shown as possessing any arable of their own;¹⁰⁶ but it may become obfuscated in the cases where the *paroikoi* households do possess some land.

If the domanial lands were cultivated by a mixture of corvées and tenant farming, as was certainly the case wherever there were large estates, questions arise as to how much corvée labor there was and what were the terms of renting or sharecropping. We know something about corvée labor. The *praktika* of the fourteenth century give a varying number of days of labor owed by the *paroikoi* to the landlord; they also indicate that the number varied from domain to domain or from area to area. Indeed, the conditions surrounding corvée labor are among the most variable factors of production in all the actual and former Byzantine possessions. In Byzantine Peloponnese in the fifteenth century, the *angareia* was exacted from the *paroikoi* throughout the year. Plethon found it a servile and onerous form of taxation.¹⁰⁷ In Asia Minor, in the thirteenth century, the inhabitants of the village of Bare must also have found it objectionable, for they refused to perform labor services for the monastery of Lembiotissa.¹⁰⁸ According to the Latin *praktikon* of Lampsakos (1219), each *boidatos* and *zeugaratos* owed 48 days of labor services a year, commuted to a payment of 4 hyperpyra. Those without oxen owed 24 days, probably commuted to 1 hyperpyron.¹⁰⁹ In Macedonia, 12, 24,

¹⁰⁴ In the example given in the document, 11.5 *zeugaratoi* hold 470 modioi, i.e., an average of 41 modioi per *zeugaratos* (Uspenskii, “Vizantiiskie zemlemery,” 2:308).

¹⁰⁵ Schilbach, *Byzantinische Metrologie*, 68–70.

¹⁰⁶ Below, 000.

¹⁰⁷ Lambros, *Παλαιολόγεια καὶ Πελοποννησιακά*, 3:122. On *angareia*, cf. Oikonomides, “Role of the State,” 978–9.

¹⁰⁸ MM 4:255–56.

¹⁰⁹ G. L. Tafel and G. M. Thomas, *Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig*, 3 vols. (Vienna, 1856–87), 2:209.

and 52 full days of labor are attested, although the 52 days appears only once.¹¹⁰ In a village not far from Prilep, an area in Serbian hands since the early fourteenth century, two days a week per household are mentioned.¹¹¹ The difference, obviously, is significant in terms of the form of land exploitation. Sometimes the *angareia* was converted into cash. In Frankish Peloponnese, the *servicium personale* was, on some estates, bought off at 5 perperi per household and was thus in the nature of a flat tax.¹¹² In fourteenth-century Macedonia, one also gets the impression that all households owed the same amount of corvée labor, since the documents, generally speaking, do not differentiate according to size, wealth, or labor power of the household, and since the *angareia* appears at the end of the *praktika*, with the rest of the dues generally levied on the *paroikoi*. But a *praktikon* of some lands, near Rentina in Macedonia, in 1420, calculates the cash replacement of the *angareia* as 4 nomismata for the *zeugaratoi*, 3.5 for the *boidatoi*, 3 for those with no animals, and 1 nomisma for the widows. These are large sums of money when one realizes that the base tax of the *zeugaratoi* on that same domain was 4, 5, and 8 nomismata, while that of the *boidatoi* was 4.5, 5, and 6 nomismata.¹¹³ The basis for estimating the two payments was certainly different, but the size of the payment for labor services is impressive.

The details of cultivation with corvée labor escape us: the landlord had his own oxen (sometimes called *doulika zeugaria*),¹¹⁴ but it is also plausible that the peasants co-operated, sharing their oxen, in cultivating the land of the landlord. In Frankish Peloponnese, the *Assizes de Romanie*, the law code of Frankish Greece, stipulated that peasants were allowed to sell all their animals and movable goods, except for one yoke of oxen and a donkey, which they were to save for their own subsistence and their *servicium personale*.¹¹⁵ Obviously, the provisions of this code do not apply to Byzantine lands, but they do point out a reality concerning corvée labor: for the peasant to perform it, he must also have his own subsistence assured by other means, for all of the products of cultivation through corvée labor went to the landlord.¹¹⁶ The value of corvée labor to the landlord is therefore considerable, although it is difficult to estimate its

¹¹⁰ Laiou-Thomadakis, *Peasant Society*, 181; for 52 days, see Lefort, *Actes d'Esphigménou*, ed. J. Lefort, Archives de l'Athos (Paris, 1973), no. 7 (one day per week), with reference to *Actes de Xéropotamou*, ed. J. Bompaire, Archives de l'Athos (Paris, 1964), 151, where there is a general discussion of *angareia* (corvée) from the *praktika*; cf. Ostrogorskij, *Praktika*, 364–65.

¹¹¹ *Actes de Saint-Pantéléémon*, ed. P. Lemerle, G. Dagron, and S. Čirković (Paris, 1982), 166 (donation of Stephen Dušan to the metropolitan of Serres, of a church near Kozelj (1352–53)).

¹¹² Longnon and Topping, *Documents*, nos. I, II, III, VII, and p. 271; Topping, "Régime agraire," 270ff.

¹¹³ *Lavra*, 3: no. 165. In the Latin *praktikon* of Lampsakos, the base tax paid by the *zeugaratoi* was almost 10 hyperpyra, and of the *boidatoi* 5 hyperpyra; the commuted *angareia* was 4 hyperpyra.

¹¹⁴ On this meaning of the word, see *Iviron*, 3:75; cf. *Lavra*, 3: no. 161, and *Docheiariou*, p. 275. See also Ostrogorskij, *Féodalité*, 162 n. 1. Of course the organization of large estates in Frankish Peloponnese may have differed in significant respects: see Jacoby, "Les états latins," 11ff. In the late 13th century, the estate of Theodore Skaranos seems to have been cultivated by his *paroikoi* with his own oxen: see below, 349–51. Lembiotissa had its own oxen as well: MM 4:146ff.

¹¹⁵ Longnon and Topping, *Documents*, 271–72.

¹¹⁶ On this aspect of corvée, see Nesbitt, "Mechanisms of Agricultural Production," 132.

cash-value in a precapitalist rural economy, as indeed is the case with any nonsalaried labor.¹¹⁷

If our figures for the days of corvée owed by Byzantine *paroikoi* are correct, then the amount of domain land that could be cultivated by corvée labor varied considerably. With 12 days, one may imagine that corvée labor was concentrated in periods of the highest activity, perhaps the harvest. In Mamitzon, 29% of domanial land, a very considerable proportion, was to be cultivated by corvée labor.¹¹⁸ Where the labor services were 52 days per year (only one attested case), and where the cash value of the *angareia* is very high, as in the document from Rentina, we must assume direct exploitation of a large part of the domain. On the basis of the data for the possessions of Lavra, with 24 corvée days per year, and on the understanding that a peasant with two oxen could cultivate 150 modioi, with one ox 100 modioi, and without any oxen 75 modioi, N. Svoronos has estimated that, at the time when the monastery had its greatest labor force, the peasants could cultivate with corvée labor a maximum of 20–24% of domain lands.¹¹⁹ This was, for the landlords, the part of the domain most productive in revenues, and it may be that they reserved the most fertile lands to it, as was explicitly stated in the *praktikon* of Mamitzon. Commercialized agricultural products must have come in part from this section of the domain.¹²⁰

Domain lands could also be cultivated with wage labor. Paid agricultural laborers, called *misthioi*, appear in the sources, although not very frequently. Sometimes they are poor peasants, the *eleutheroi*, a term denoting no freedom other than the fact that they do not yet pay taxes to anyone; for the most part, they own no land and no animals. We find them, for example, on the domains of the monastery of Xenophon, where they eventually become *paroikoi*.¹²¹ We find paid laborers in the Life of St. Germanos. Germanos was the son of a financial official of Thessalonike. His father, described as a rich man, hired paid laborers to work in his vineyards; they worked for wages agreed upon in advance. They were certainly not the man's *paroikoi*, and they seem to have been very poor: St. Germanos thought that their wages were disproportionately low compared to their labor.¹²² The impression one gets is that only the poorest peasants

¹¹⁷ W. Kula, *Teoria economica del sistema feudale: Proposta di un modello* (Einaudi, 1970), chap. 3. He has calculated that because of corvée labor the estates of the Polish middle-level nobility in the 18th century could show a profit of 7% a year over the market value of the property, and a return of 50% on their investments in cash.

¹¹⁸ If one takes into account the entire land of the village, including that owned by the *paroikoi*, the proportion of land under direct exploitation is 15%: cf. Lefort, "Rural Economy," note 15.

¹¹⁹ *Lavra*, 4:165–67. But in 1321, it seems that the monastery of Patmos expected to cultivate a newly granted domain on Lemnos with labor services alone: E. Vranousi, Βυζαντινὰ ἔγγραφα τῆς Μονῆς Πάτμου, 2 vols. (Athens, 1980), 1: no. 43 (1321).

¹²⁰ In 19th-century Russia, commercialized exploitation is said to have been undertaken primarily on a few great domains, cultivated with corvées and eventually with paid labor: J.-C. Asselain, *Histoire économique de la révolution industrielle à la première guerre mondiale* (Paris, 1985), 181.

¹²¹ Ostrogorskij, *Praktika*, 330ff.

¹²² P. Joannou, "Vie de S. Germain l'Hagiorite par son contemporain le patriarche Philothée de Constantinople," *AB* 70 (1952): 59–60. The incident must have taken place in the 1260s; the saint was born in 1252 and entered Mt. Athos at 18: *ibid.*, p. 49.

were day laborers, such as Nicholas Bardas in Thessaly, who, beset by extreme poverty, sold 1 modios of vineyard to buy an ox with which to till the land, "if I can."¹²³ Peasants without oxen or with a single ox might supplement their income by hiring themselves out as day laborers, either to great landlords or to richer peasants, but it was probably not in their interest. As for the considerable number of *paroikoi* who owned no arable, or very little arable, whether they had oxen or not, they, in all probability, worked on the estate lands both with labor services and as tenant farmers or sharecroppers. A much earlier document from the archives of the monastery of Vatopedi shows the three types of labor available to and used by landlords: *paroikoi*, day laborers (*misthioi*), and tenants, who in this case seem to have been not *paroikoi* but independent peasants.¹²⁴

Labor services and day labor aside, it is assumed that the peasants who worked on the land of others in this period did so under fixed rent agreements or sharecropper tenancy agreements. This, too, must have varied with locality and chronology.¹²⁵ The term *pakton*, meaning a rent which in principle was paid in cash and was independent of the level of annual production, appears in our sources, but it is virtually impossible to estimate how much the average rent was. In the eleventh century, the *pakton* was 1 nomisma per 10 or 12 modioi of first-quality land, and the fisc connected it to the land tax: the *pakton* was supposed to be double the land tax. For the period under discussion there is only one piece of information: in 1295 the rent charged on land that was to be planted with vineyards was 1 hyperpyron per 10 modioi; this may, however, have been land of exceptionally high value.¹²⁶ Nor is there any indication that a strict relationship between the *pakton* and the land tax continued to exist. *Paroikoi* entered into cash rent agreements, as did independent peasants: before 1204 the *paroikoi* of the monastery of Panachrantos had rented its lands, situated near the Maeander River.¹²⁷ For high-yield agricultural activities, such as vegetable gardens, there were ad hoc agreements, probably arrived at by an estimation of the expected revenues of the property.¹²⁸

Plethon says that in the despotate of the Morea peasants paid their rent in cash, which he considers unfair and servile, because it did not take into account the variations of production during good and bad years, a valid criticism of fixed rents in an

¹²³ MM 4:402–4 (1271); cf. *ibid.*, 407–9.

¹²⁴ Arkadiou Vatopedinou, "Αγιορειτικά Ἀνάλεκτα ἐκ τοῦ ἀρχείου τῆς μονῆς Βατοπεδίου," Γρηγόριος ὁ Παλαμᾶς (1919), 3:209ff (1080) = M. Goudas, *ΕΕΒΣ* 3 (1926): no. 2, pp. 121–22.

¹²⁵ In the Latin-held areas of the Peloponnese, the tax of the *paroikoi* was paid in cash, while payment for lands other than the *stases* were often paid in kind: Topping, "Régime agraire," 266.

¹²⁶ *Iviron*, 3: no. 67. On rent, cf. Lefort, "Rural Economy," 295ff.

¹²⁷ MM 4:176–9. The term is *choropaktikos*.

¹²⁸ Sathas, *MB* 4:622–23. The terms in this contract formula are perfectly compatible with the terms found in an actual contract, *Iviron*, 4: no. 97, if one takes into account the special circumstances of the latter: see below, 352–53. The terms ἀμπελόπακτον and ξενοχωρητικὸν ἀμπελόπακτον refer to vineyards rented out and (in the second case) cultivated by peasants other than the landlord's own *paroikoi*. The term ἀμπελόπακτον has been variously interpreted as the rent of such vineyards (*Actes de Dionysiou*, ed. N. Oikonomides, Archives de l'Athos (Paris, 1968), 45) and as the vineyards themselves (Lefort, *Villages*, 10). The charge of 1 hyperpyron per 8 modioi, associated with ἀμπελόπακτα, is too low to represent a rent; it is probably the tax on these vineyards (*Iviron*, 3:154).

agricultural society.¹²⁹ Indeed, an important part of his proposals for reform in the agrarian economy consisted in changing the rent agreements, so that the peasants would pay a stated share of the produce once a year. Plethon talks of these payments as “tax,” but it is clear, from the rest of his proposals, that he was speaking of a combination of tax and rent. The terms on which the rent was to be paid is expressed, in his text, as a division of the production (the “fruits of the earth”) between labor, those who own the means of production (τοῖς τᾷ τέλει παρεχομένοις τοῖς ἔργοις), and those with administrative/military functions, from the emperor to the soldiers (elsewhere identified as the fisc). The fruits of the earth are identified as wheat, wine, olive oil, cotton, and the products of animal husbandry, including milk and wool. The means of production are oxen, vineyards, pasturelands, “and other such things,” and the division must be made after the seed grain has been set aside, and, in the case of the flocks, after the proper replacements (e.g., of dead sheep) have been made. Those agricultural workers who own the means of production would pay only one-third to the fisc. Those peasants who share the means of production (presumably with the landlord) should receive half the production.¹³⁰ No labor services should be extracted. This idealized scheme, when reduced to its essentials, means that peasants who own no oxen, vineyards, and so on, but only their labor, cultivate lands receiving one-third of the production—excluding seed—with the state and the landlords getting two-thirds, while those who own the means of production pay one-third of their production as tax, keeping two-thirds.

The few data we have from the fourteenth and the early fifteenth century suggest that land tenancy and sharecropping arrangements revolve around one-third and one-half of the production for the landlord. The usual term for rent in kind is *morte*, which does not by itself specify the proportions of the harvest that go to proprietor and tenant. The thirteenth- and fourteenth-century sources from Asia Minor and Macedonia also commonly use the term *dekatiā*, which, properly speaking, would refer to one-tenth of the gross production, with the seed and all costs of production falling on the tenant.¹³¹ In this period, however, the term has a generalized meaning, similar to that of *morte*, and refers simply to crop-sharing.¹³² Contract formulas from this period give two types of crop-sharing. For arable land, the tenant provides the seed and all the expenses of cultivation, and keeps two-thirds of the crop at the time of threshing; the proprietor receives one-third of the production, and has no expenses except for the land tax, which he pays.¹³³ For high-yield crops, such as wine, the share of the

¹²⁹ Expressed in modern terms, Plethon's criticism would be that in a fixed-rent contract, the tenant assumes all of the risk involved in production uncertainty.

¹³⁰ Lambros, *Παλαιολογία καὶ Πελοποννησιακά*, 3:254–56, and cf. 123.

¹³¹ N. Oikonomides, “Terres du fisc et revenu de la terre aux Xe–XIe siècles,” *Hommes et Richesses*, (as above, note 1), 2:332ff, for all these contracts. See also Lefort, “Rural Economy,” 300. On the *dekate*, cf. Laiou-Thomadakis, *Peasant Society*, 216ff.

¹³² Cf. Lefort, “Rural Economy,” 300. The terms *morte* and *dekatiā* are used interchangeably in MM 4:420–21.

¹³³ Sathas, *MB*, 4:622; cf. MM 2:509 (1401).

landlord was one-half of the production, again without any expense on his part. The sharing was done after the wine (or perhaps the must) had been extracted, which is another way of saying that the landlord incurred no expenses.¹³⁴

The existence of contract formulas may suggest that similar terms were widespread in the Byzantine possessions. In fact, even in lands no longer Byzantine, similar contracts obtained: in Cyprus, serfs paid to their lord one-third of the crop, while free peasants paid to the landlord a fixed annual payment, evaluated at one-fourth to one-fifth of the crop, presumably based on the average yield.¹³⁵

Paroikoi certainly entered into sharecropping agreements. Among numerous documents, one might cite a Serbian act for the metropolitan of Serres, which says explicitly that the *paroikoi* pay no tithe (δεκάτη) when they cultivate their own patrimonial lands, but do pay it when they cultivate the land of the church. "Tithe" here is equivalent to *morte*, that is, a payment in kind.¹³⁶ There were also peasants and cultivators who were not *paroikoi*, and who entered into sharecropping arrangements. Such were the gardeners subletting from the Argyropouloi in the early fifteenth century or the men renting vineyards from some nuns in Constantinople in 1401.¹³⁷

The terms of sharecropping were not, I think, different for *paroikoi* and for peasants who were not dependent on a landlord. The dependence of the *paroikos* was, on one hand, fiscal: he paid his *telos*, his tax, to the landlord. On the other hand, it was economic up to a point: this was, to some extent, a captive labor force, which was meant to cultivate the lands of the proprietor to whom the *paroikoi* were granted, by labor services or sharecropping agreements or both. Conditions differed depending on the strength of the labor force thus granted and also on the type of land grant. Monasteries with a very small number of *paroikoi* must have sought to rent their lands to other peasants as well. Grants to small and medium-level proprietors, specifically the *pronoia* holders, may have involved a different set of relationships between peasants and landlords than those that obtained with the owners of large lay or ecclesiastical estates. In the case of a *pronoia* holder, the taxes and duties paid by the *paroikoi* form 50–75% of his revenues, while one also has the impression that the *paroikoi* of *pronoia* holders owned more arable land.¹³⁸ That could mean that rent or sharecropping agreements played a correspondingly lesser role in lands held in *pronoia*.

There was considerable variety in the form of exploitation of land, especially arable land. The amount of seigneurial land, which does not appear as land in the possession of *paroikoi*, can vary widely. In Mamitzon it was 2,100 modioi, that is, 116% more than

¹³⁴ Sathas, *MB*, 4:620–21; *MM* 2:506–7.

¹³⁵ J. Richard, "Le Casal de Psimolofu et la vie rurale en Chypre au XIV^e siècle," *Mélanges d'archéologie et d'histoire* 59 (1947): 132–33, reprinted in *Les relations entre l'Orient et l'Occident au Moyen Âge: Etudes et documents* (London, 1977), art. 4.

¹³⁶ *Pantélémon*, 166 (1352/53).

¹³⁷ Below, 352–53; *MM* 2:506–9.

¹³⁸ N. Oikonomides, "Notes sur un *praktikon* de pronoiaire (juin 1323)," *TM* 5 (1973): 340–44; Laiou-Thomadakis, *Peasant Society*, 60.

that of the *paroikoi*. In the Slavic *praktikon* of Hilandar, it was five times more than the land given to *paroikoi*; in the monastery of Zographou it was ten times more.¹³⁹ In the village of Brasta, the seignorial land is double that given to the *paroikoi* (see Table 4). The *paroikoi* of most villages and most monasteries possessed very little to no arable; in other domains, both monastic and those of lay *pronoiai*, they did possess land: in the case of the monastery of Esphigmenou, peasants who had a pair of oxen held an average of 50 modioi, and those with one ox held 25 modioi (see Tables 3, 4, and 5). In some cases, for example in Radolibos, in Genna, and in Lorothon (Table 5), the peasant households registered in the *praktika* were sufficient to cultivate the domain land, and indeed they may represent an excessive labor force, since the totality of the domain land, when divided, would result in rather small tenures.¹⁴⁰ The peasants of Genna, and their oxen, must have cultivated other lands as well. In other villages, if the *paroikoi* registered were the only ones cultivating domain land, their tenures would have been very large indeed.

Tables 3, 4, and 5 present some information regarding the ownership of arable land, vineyards, and oxen, with particular emphasis on the relation between land ownership and the ownership of oxen. These tables are selective and do not aim to present a total picture, or an average one. Some villages are included because they were very large and may represent the ways of an old, established village (Radolibos); Brasta and Portarea are included because in these villages land was distributed to the *paroikoi*; Leipsochorion and Eunouchou are included because they had, uncharacteristically, a very high proportion of oxen.

The distribution of animal work power, always in Byzantium a measure not only of the wealth of the peasant but also of his productive capacity and therefore of the land that might be allotted to him to cultivate, was highly skewed, as may be seen from Tables 3 and 4. A small number of households had two or more oxen, a number of households had one ox, and many had none. On the domains of Lavra, in some villages (e.g., Gomatou and Selada), ca. 30% of households had oxen, in others the proportion was higher. In its properties in the theme of Thessalonike generally, in 1321, just under 50% of the households had any oxen. In Radolibos, too, just over one-third of the households possessed oxen. Table 5 shows the number of oxen per domain and establishes the ratios of oxen to households and land to oxen. These averages show the workforce available to the domain, always with the exception of any oxen that might belong to the landlord.

The unequal distribution of oxen within the same village, and particularly the fact

¹³⁹ Ostrogorskij, *Praktika*, 297ff. Unfortunately, the conclusions drawn by Ostrogorsky, namely, that this land was much less productive of revenue (for the landlord) than the land given out to *paroikoi* is not tenable, for it is based on the erroneous premise that the 1 hyperpyron per 50 modioi listed as revenues for this land was an economic revenue, whereas in point of fact it was merely a fiscal revenue: i.e., it represented the tax this land would have owed to the fisc, which was being remitted, and therefore it constitutes a revenue not in the sense of income received but rather in the sense of cost not incurred.

¹⁴⁰ Cf. Lefort, "Radolibos," 220.

that the proportion of peasants with a pair of oxen was small, is a significant factor in the organization of production.¹⁴¹ It necessitates cooperation among peasant households, especially between those with a full team and those with only one ox.¹⁴² It may, furthermore, mean that the landlord had his own teams of oxen, to be used by the peasant at the very least for *corvée* labor, that is, for the direct exploitation of part of the domain: an example of this may be found in the middle-sized estate of Theodosios Skaranos.¹⁴³ This must be the case in villages or domains with a very high proportion of land to oxen. In a large number of domains, the proportion of oxen to land is so low that either the tenures of peasants were very large, or not all of the domain land was cultivated, or the monastery had its own oxen. A combination of the three possibilities may be what in fact obtained; this would mean that a *zeugaratos* might well cultivate more than 100 modioi of land, which would not, however, belong to him, but would, in part or wholly, be held under tenancy or sharecropping agreements. In the case of the *paroikoi* of the lay *pronoiaros* Monomachos, the *paroikoi* have considerable land and oxen.¹⁴⁴

The nature of the terrain affected to some extent both the ratio between households/arable land and the possession or non-possession of arable by the *paroikoi*.¹⁴⁵ That is to say, in areas with a highly developed viticulture or, more obviously, in mountainous or infertile land, the *paroikoi* might own vineyards rather than arable. However, the terrain alone does not suffice for a complete explanation of the fact that often the *paroikoi* owned little or no arable, and of what seems to be a prevalence of sharecropping. Surely the conditions under which the peasants cultivated land were a matter of choice, whether that of the landlord or, at some earlier point, that of the fisc; to some extent also the contracts, especially the sharecropping contracts, represent an arrangement between the landlord and the tenant. We must, therefore, examine the interests of both parties. From a short-term viewpoint, the economic interests of the landlords were better served by *corvée* labor and by sharecropping agreements, both of which would give them a higher revenue from their land than would the revenues they collected on land given out to peasants to possess and pay tax on. Cultivation with *corvée* labor would produce the highest revenues. The least beneficial for them is the collection of revenues from land owned by peasants. If a *paroikos* possessed 50 modioi of arable, the landlord's yield from it would be 1 hyperpyron for the base tax, plus supplementary taxes (no more than 0.5 hyperpyron), plus *corvée* labor. If the same 50 modioi

¹⁴¹ Since oxen were taxed, it is unlikely that they would have been consistently underregistered. Some peasants owned horses or buffaloes, which can certainly be used in cultivation; for the sake of simplicity, and because their numbers are too small to make a statistical difference, these are not included in the discussion.

¹⁴² In 1833 Thiers observed that in Greece, destroyed after the War of Independence, only one-fourth of the peasants had a full team of oxen. Most peasants shared oxen to make a full team. D. A. Zografos, *Ἱστορία τῆς Ἑλληνικῆς Γεωργίας*, 1st ed., 3 vols. (Athens, 1924; repr. 1976 [2 vols.]), 3:218.

¹⁴³ Below, 349–51. Cf. MM 4:146–50 (1234): Lembiotissa will cultivate the land with its own *zeugaria* and get the income. Cf. above, note 114.

¹⁴⁴ Ostrogorskij, *Praktika*, 350ff.

¹⁴⁵ This was already observed by Ostrogorskij, *Praktika*, 318.

Table 3
The *Paroikoi* of Lavra, Theme of Thessalonike, 1321
Draft Animals, Land, and Vineyards

	Families				Labor power				Land	Vineyards
Village	Households	Men	Women	Total	Zeugaria	Boidia	Donkeys	Horses	(modioi)	(modioi)
Katepanikion of Hierissos										
Hierissos	+15	+28	+28	+56	1	1	5	1	+38	4
Gomatou	104	199	173	372	13	15	38	20	32	121
Selada	162	361	325	686	17	36	69	2	116	132
Gradista	32	74	64	138	3	6	10	—	36	50
Metalin	28	55	64	119	3	8	18	—	229.08	51.33
Arsenikeia	7	ca. 14	10	ca. 24	3	3	1	—	49	2.17
TOTAL	+348	+731	+664	+1,395	40	69	141	23	+500.08	360.5
Katepanikion of Hermeleia										
Kastron	13	18	19	37	1	3	2	—	—	3
Katepanikion of Longos										
Longos	34	50	57	107	—	13	6	—	95.5	10.5
Parthenon	4	11	6	17	—	1	—	—	?	2.5
Psalis	1	5	5	10	1	—	1	—	6	2.5
TOTAL	39	66	68	134	1	14	7	—	+101.5	15.5
Katepanikion of Kalamaria										
Drymosyrta	56	110	98	208	16	11	11	2	—	—
Agridion										
Paschale	10	20	12	32	4.5	—	—	—	—	—
Panagia	29	52	33	85	8.5	15	4	—	—	—
Krya Pegadia	35	66	62	128	20.5	7	7	—	—	—
TOTAL	130	248	205	453	49.5	33	22	2	—	—
Karbaioi	26	48	47	95	10	3	2	1	—	39
Genna	19	45	38	83	9.5	3	5	1	—	32.50
Neochorion	28	55	42	97	17	2	3	—	—	79.60
TOTAL	73	148	127	275	36.5	8	10	2	—	151.1
Loroton	60	133	117	250	41	13	11	4	—	237.66
Pinson	43	76	63	139	16	6	21	—	11	87.08
St. Euphemia	68	127	109	236	32.5	16	25	—	2.33	248.42
Sarantarea-										
Neochorion	41	66	59	125	18.5	1	3	1	—	119
Gournai	29	43	47	90	6	—	6	—	—	28
Agathe	1	3	4	7	1.5	—	—	—	—	5.5
TOTAL	182	315	282	597	74.5	23	55	1	13.33	488
TOTAL FOR KALAMARIA										
KALAMARIA	445	844	731	1,575	201.5	77	98	9	13.33	876.76

continued

Table 3
(continued)

Village	Families				Labor power				Land	Vineyards
	Households	Men	Women	Total	<i>Zeugaria</i>	<i>Boidia</i>	Donkeys	Horses	(modioi)	(modioi)
<i>Katepanikion of Kassandreia</i>										
Skellochorion	17	31	35	66	5	3	4	1	200.25	19.66
Ptelaia	18	32	29	61	2	3	7	—	32.84	13.17
TOTAL	35	63	64	127	7	6	11	1	233.08	32.83
TOTAL FOR										
THESSALONIKE	+880	+1,722	+1,546	+3,268	250.5	169	259	33	+848	+1,288.6

Source: N. Svoronos, "Le domaine de Lavra sous les Paléologues," in *Actes de Lavra*, ed. P. Lemerle et al. (Paris, 1982), 4: 173c–f.

Note: Approximately 28% of the households have a yoke of oxen; approximately 19% of the households have one ox; approximately 53% of the households have no oxen. Ratio of oxen to households: 0.76:1

Table 4
Ownership of Oxen in Selected Villages of Macedonia

	Number of	2 pairs	1.5 pairs	1 pair		Total	Land of	Domanial	Ratio:	Ratio:
	households	oxen	oxen	oxen	1 ox	oxen	<i>paroikoi</i>	land	oxen/	total arable
							(modioi)	(modioi)	household	land/ox
										(modioi)
Brasta (1318) ¹	47			6	15	27	1,350	3,000	0.57	161
Radolibos	255	4		26	56	124			0.49	
(1316) ²										
Leipsochorion/ Eunouchou ³	32	5	3	13	7	62			1.94	

¹*Actes d'Esphigmenou*, ed. J. Lefort (Paris, 1973), table I and no. 14.

²*Actes d'Iviron*, ed. J. Lefort, N. Oikonomides, and D. Papachryssanthou (Paris, 1985–95), 3: no. 74.

³*Actes de Chilandar*, ed. L. Petit, *VizVrem* 17 (1911), no. 38.

Table 5
Oxen, Land, and Vineyards in Villages of the Chalkidike

Village	Households	Oxen	Buffaloes	Vineyards of <i>paroikoi</i> (modioi)	Arable land of <i>paroikoi</i> (modioi)	Domanial land (modioi)	Domanial vineyards (modioi)	Oxen/ household	Total land/ox (modioi)
Epano Antigonia (1320)	7	5		19.5	50	500	5.5	0.7	100
Kato Bolbos (1320)	21	10		?		6,450	4	0.5	645
Kato Bolbos (1341)	24	38		?		6,450	12	1.6	170
Drymosyrta (1321)	56	43		68.9		8,000		0.77	186
Genna (1321)	19	22		32.5		445.5		1.15	20
Gournai (1321)	29	12		28		1,400	51	0.4	117
Karbaioi (1321)	26	23		39.3		2,300 (all cultivated)		0.9	100
Kyra Pegadia (1321)	35	48	6	57.3		4,000 (all cultivated)		1.37	83
Loroton (1321)	60	75	24	238.5		1,900	66	1.25	25
Neochorion (1321)	28	36		78.4		1,850	21	1.3	51
Panagia (1321)	29	32		25		1,010		1.1	31.5
Pinson (1321)	43	39		87.5		6,000	18.6	0.9	154
Portarea (1318)	29	22		44.8	1,017	2,100	12	0.75	142
St. Barbara (1320)	4	5		14.5		900	26	1.25	180
St. Euphemia (1321)	68	83		246.1		4,000		1.2	48
St. Mamas (1335)	16	16		18	50	1,000	?	1	62.5
Sarantarea (1321)	41	36	2	118.9		14,500	40	0.88	402
Stomion (1320)	17	2		3		2,410	9	0.12	1,205
Stomion (1338)	19	9		10.5		2,422	26	0.47	269

Source: J. Lefort, *Villages de Macédoine*, vol. 1, *La Chalcidique occidentale* (Paris, 1982).

were cultivated on sharecropping terms, with the landlord getting one-third of the gross product, that share would be 4 hyperpyra. In the short and medium term, then, this was more profitable to the landlord, although not necessarily in the long term; for it has been estimated that the richer peasant households tended to have much greater stability over time than the poor ones, which means greater stability of the labor force.¹⁴⁶ Furthermore, tradition itself argued for the distribution of land to peasants according to their labor power: in 1249 an imperial order to Constantine Laskaris, *doux* of the theme of Thrakesion, in Asia Minor, commanded him to make a census of the village of Mela, registering the *paroikoi*, and give the appropriate land to them according to the animal power they possessed, so that they would pay the appropriate tax.¹⁴⁷ This is very much in the spirit of the *Apokope* and undoubtedly was the case when the *paroikoi* belonged to the fisc, which collected taxes from them.

From the point of view of the peasant, it would be in his economic interest to own land rather than rent it in a sharecropping arrangement. However, the difference might be counterbalanced by noneconomic factors, such as the protection afforded by the landlord.¹⁴⁸ Cultivating the landlord's land by corvée labor would be the arrangement least beneficial to the tenant.

Given the above, one may assume that the considerable differentiation we find in the possession of arable was due to a number of factors. Peasants might own arable land due to the fact that *pronoia* grants were grants of a productive labor force with its lands or to the possibility that in some villages, such as those belonging to Esphigmenou, the monastery inherited a situation or was far-sighted enough to create a situation in which its peasants possessed arable, while other monasteries did not take the same view. It might also be due to the possibility that in some areas peasants might have had a better bargaining power than in others. When landlords did not distribute land to peasants, they may simply have been following their short- and medium-term, but evident, economic interests, since domanial land, cultivated on a sharecropping basis or with labor services, gave them greater revenues. Sharecropping, in the end, may be the form of tenure that best suited the *combined* interests of landlord and tenant.

While older economic theory considered sharecropping inefficient primarily on the basis that it discourages investment on the part of both tenant farmer and landlord, more recent studies have pointed out that, if the interests of both landlord and tenant are considered, sharecropping is, indeed, Pareto-efficient, and that its distinctive feature is the continuing incentive on both sides to maximize the efficiency of agricultural production.¹⁴⁹ The risk-sharing aspect of sharecropping is also very important.¹⁵⁰ In

¹⁴⁶ Laiou-Thomadakis, *Peasant Society*, chap. 6.

¹⁴⁷ MM 4:182–83.

¹⁴⁸ Lefort, "Rural Economy," 231–32. N. Oikonomides, *Fiscalité et exemption fiscale à Byzance (IXe–XIe s.)* (Athens, 1996), 113–14.

¹⁴⁹ J. D. Reid, Jr., "Sharecropping and Agricultural Uncertainty," *Economic Development and Cultural Change* 24 (1976): 549–76, esp. 574–76. Pareto efficiency defines a distribution from which two parties cannot depart without worsening the position of at least one of the two.

¹⁵⁰ J. E. Stiglitz, "Incentives and Risk Sharing in Sharecropping," *Review of Economic Studies* 41 (1974): 219–55, esp. 251.

real and historical terms, of course, much depends on the terms and length of tenure and the kind of supervision the landlord exercises, that is, whether he defines the terms of cultivation, contributes managerial expertise, and so on. In specific historical circumstances, much also depends on the availability of other forms of cultivation, for example, cultivation with wage labor¹⁵¹ or with *corvée* labor; all of these factors, and others, such as technological development, would affect the negotiating position of the landlord and the tenant. Compared to tenancy with a fixed rent, sharecropping certainly is a more efficient arrangement.

Sharecropping in itself, then, does not mean that the productivity of the agricultural economy in Byzantium was adversely affected, since, especially in long-term contracts, investment is certainly not precluded. If, from the point of view of the tenant, it was a worse arrangement than ownership of land, and if from the viewpoint of the landlord it gave him less revenue than *corvée* labor, it may well be that, when the interests of both are taken into account, the arrangement produced a workable equilibrium. It should also be noted that the terms of agricultural contracts, which, as we have seen, suggest that the landlord did not contribute to the expenses (he did not provide the seed, although he may, in many cases, have contributed part of the animal force), reflect conditions that are more beneficial to the tenant than an arrangement by which the landlord shares the expenses and gets a larger proportion of the crop.¹⁵²

Revenues and Investments

The Revenues of the Peasant

The peasant household, whether that of a *paroikos* or of an independent peasant, was firmly embedded in the polyculture typical of the Byzantine agrarian economy that, indeed, is normal in preindustrial peasant societies. A peasant household in Macedonia would have perhaps some fields, but most often these would be rented from a landlord; most often, it would own a piece of vineyard, a garden, and, variously, beehives, some fruit trees, or a boat for fishing if the village was near the water; a number of households would have an ox, and the richer households might possess a pair of oxen, a cow, sometimes a horse, sheep, and goats. Polyculture both reflects the need for self-sufficiency and to some degree fulfills it. A peasant household might wish, as an ideal, self-sufficiency in staple crops. Those with one ox might be barely able to achieve it, in good times; everything depended on how much land the peasant was able to cultivate, and how able he was to rent another ox or get one from the landlord. Those with a yoke of oxen, renting 80 or more modioi of land, might well go beyond self-sufficiency and have a small surplus.¹⁵³ This estimate assumes a crop yield of 1:4 for

¹⁵¹ See P. K. Bardhan and T. N. Srinivasan, "Cropsharing Tenancy in Agriculture: A Theoretical and Empirical Analysis," *American Economic Review* 61 (1971): 48–64.

¹⁵² *Ibid.*, 61. The economic literature on sharecropping is extensive. Among other works, I note S. N. S. Cheung, *The Theory of Share Tenancy* (Chicago-London, 1969), and D. G. Johnson, "Resource Allocation under Share Contracts," *Journal of Political Economy* 58 (1950): 111–23.

¹⁵³ Lefort, "Rural Economy," 294ff. Other estimates put the level of self-sufficiency in cereals for a peasant family of four with one ox at 25 modioi of land (2.5 ha) or at 50 modioi: Lefort, "Radolibos,"

land of second quality and 1:5.6 for land of first quality. The yield ratio is plausible for Thrace, Macedonia, Thessaly, Bithynia, and the Maeander valley, but not for the poorer parts of the empire. If the peasants rented land exceeding 80 modioi, they would be realizing a true surplus from cereal cultivation. The peasant with a full team of animals, then, could have a surplus, but there were not many of those. Self-sufficiency in cereals was thus an ideal rather than a reality for the majority of peasants. Those with no oxen at all, a significant number, would have a hard time of it, and here the other important aspect of polyculture plays an important role.

While few peasants owned land, many owned vineyards. They were an important and valuable source of wealth; they were bought, sold, and given as dowry. The distribution of vineyards was relatively equitable: more than three-quarters of the households of *paroikoi* owned vineyards. This suggests that wine (and raisins) was produced primarily for household consumption, with the surplus destined for the market. Individually, most plots were small, but peasants with vineyards of 20 modioi or so are also attested.¹⁵⁴ Those at the upper end of the scale had most of the opportunity and most of the surplus to send or take to market. While the general population of *paroikoi* rarely had enough grain to market (except perhaps for the payment of their tax), both vineyards and flocks of animals could produce marketable surplus. Peasants in Asia Minor and the Peloponnese also owned olive trees. Flax and cotton were cash crops, as was silk in the Peloponnese. Occasionally, a peasant household might own a mill, whose revenues were not inconsiderable.¹⁵⁵

Peasants also owned sheep and goats, in numbers that varied widely among individual households. Indeed, in Macedonia this is the steepest differentiating factor in measuring the wealth of peasant households. In the village of Gomatou, in 1300–1301, the largest flock consisted of 300 animals, and four households owned 770 (i.e., 65%) of the 1,193 sheep in the village; the great majority of households are not registered as owning any sheep or goats, although it is likely that the tax registers did not record the animals when the number was very small.¹⁵⁶ The great variance in the number of sheep and goats owned by peasant households, as well as the existence of some large flocks, suggests very strongly that this was an activity whose products were commercialized.¹⁵⁷

The diversity in primary production is also characteristic of the activity of individual villages and peasant households: polyactivity, as has already been suggested, was an important characteristic of the agrarian economy. A number of products were both for auto-consumption and for the market, whether they were marketed by landlords or peasants: grain, wine (an important cash crop), legumes, vegetables, fruit. The very unequal distribution of flocks among peasant households, and the existence of some

222; Kondov, “Über den wahrscheinlichen Weizennertrag,” 97–109. These estimates assume a yield of 1:5.

¹⁵⁴ On the distribution of vineyards, see *Lavra*, 4:173a–f, and Laiou-Thomadakis, *Peasant Society*, 176ff.

¹⁵⁵ See below, pp. 353–54; for silk, see Hodgetts, “Venetian Officials.”

¹⁵⁶ Laiou-Thomadakis, *Peasant Society*, 173–74.

¹⁵⁷ Laiou, “The Economy of Byzantine Macedonia.”

large flocks, also suggest the commercialization of the products of animal husbandry by some peasants as well as by landlords. Wool is particularly important because it enters the secondary sector of production. The wool collected from flocks owned by peasants may have been sold to large landowners, for example monasteries, which had their own cloth manufacturing. Both landlords and peasants must have sold it, as wool and yarn, to the cities: Thessalonike and Serres manufactured some woolen cloth. There were also small cottage industries of woolen cloth. In the late thirteenth century, Patriarch Gregory of Cyprus ordered a hat in Thessalonike and a rough woolen cloak that was to be woven in the countryside, in a village inhabited by “men who wear cloaks and make them,” that is, a place that specialized in the production of such garments.¹⁵⁸ Thus the agricultural economy also involved the treatment of its products in the countryside as well as their sale in the cities.

The artisanal activity of the peasantry extended beyond the manufacturing of woolen cloth. Studies of the names of peasants in Macedonia in the first decades of the fourteenth century have revealed the existence, in the larger villages, of blacksmiths, potters, shoemakers, hatters, and tailors. In Radolibos, J. Lefort proposes the existence of family workshops of shoemakers and potters. Although the households of most village craftsmen were also engaged in agricultural activities, the degree of occupational differentiation was higher than it had been in the eleventh or twelfth centuries. Craft specialization may indicate some prosperity, as well as a high level of exchange within the village. As the letters of Gregory of Cyprus suggest, sometimes the products of village craftsmanship were marketed outside the village as well.¹⁵⁹

With polyculture and polyactivity, self-sufficiency in cereals is not essential, for there are other products that can be exchanged for cereals, either through the market or through barter and other informal arrangements. A number of peasant households, a minority, as has been suggested, were beyond self-sufficiency in cereals; the rest survived by adopting flexible arrangements that optimized the use of their labor and the use of available animals. The survival of peasant households owed a good deal to the existence of polyculture and polyactivity. Given this fact, I have not made an effort to estimate the revenues of a peasant household.

The Revenues of the Large Estate

Large estates, especially monastic ones, were formed anew after the debacle of 1204 in Asia Minor and after the reconquest of Constantinople in Macedonia and Thessaly. In both cases, it would seem that the result had been that large proprietors had lost either their lands or their peasants, who refused to pay dues to them, or both. The restoration of Byzantine political power led, in both cases, to donations of land to

¹⁵⁸ S. Eustratiades, “Γρηγορίου τοῦ Κυπρίου Ἐπιστολαί,” *Ἐκκλησιαστικός Φάρος* 2 (1909): letters 82 and 87; cf. Laiou, “The Economy of Byzantine Macedonia.”

¹⁵⁹ J. Lefort, *Séminaire de l'Ecole Pratique des Hautes Etudes*, “Anthroponymie,” 236–38; idem, “Rural Economy,” 302–3; Laiou-Thomadakis, *Peasant Society*, 124–27. On trading activity by peasants, see Matschke, “Commerce,” 786–87.

monasteries and, certainly after the reconquest of the Balkan provinces, to the donation of large estates to aristocrats, some of whom acquired very great fortunes. It took time to rebuild some fortunes: by 1328 the monastery of Iveron had just managed to acquire lands equal to those it had had in the early twelfth century.¹⁶⁰

The large estate comprised a variety of sources of revenues. For one thing, in this period, ecclesiastical estates, the estates of *pronoia* holders, even the estates of middle-level but privileged proprietors like Theodosios Skaranos, had fiscal revenues composed of two parts. One was actual revenues, consisting of the taxes and other dues, often in kind, of the *paroikoi*. The second type of fiscal revenue was the exemption from taxes, either supplementary taxes such as *epiteleia*, *choiroprovaton*, *choirodekastia*, and *melissoennomion*, and other state taxes, or the base land tax, all of which the proprietor would ordinarily have had to pay.¹⁶¹ The annual fiscal revenues of the monastery of Iveron in the year 1320 is estimated at 1,250 gold coins, that of Esphigmenou at 500 gold coins, and that of Lavra, the largest and richest of the monasteries of Mount Athos, at 4,000 gold coins. Of these, the actual revenues (as opposed to tax exemption), that is, the taxes of the *paroikoi*, were 459 hyperpyra for Iveron, 180 for Esphigmenou, and 1,050 for Lavra.¹⁶² I would rather not count the tax exemptions as revenues, but as expenses not incurred in the balance sheet of the domains.

The economic revenues of the great landlords are much more complex to estimate. They consisted of the revenues of the lands rented out to tenants or sharecroppers, the dues in kind of the *paroikoi*, the rent paid by peasants who were not *paroikoi* of the landlord,¹⁶³ rents on urban real estate, and the revenues from land cultivated by corvée labor. Given the numerous parameters and a number of imponderables (e.g., was all the land that was cultivable in fact cultivated?), it is very difficult to estimate the economic revenues of the landlord. In the case of Lavra, it is perhaps possible to estimate the revenues of the *arable land*, in the theme of Thessalonike, in 1321. Lavra had, at that time, 54,000 modioi of arable land in the theme of Thessalonike. If five-eighths of this land was cultivated each year, and if the average yield was 1:4.8,¹⁶⁴ the gross production of grain would be 162,000 modioi, of which 33,750 modioi would go for seed. If the proprietor received one-third of the gross production, his share would be 54,000 modioi of grain (the share of the tenants, after next year's seed has been extracted would be 74,250 modioi). At an average price of 0.09 or 0.08 nomisma per modios of grain, the revenues of the monastery would be between 4,860 and 4,320 nomismata, or 15–13% of the value of the land ($54,000 \times 0.61 = 32,940$ nomismata).¹⁶⁵

¹⁶⁰ *Iviron*, 3:19.

¹⁶¹ *Iviron*, 3:25ff.

¹⁶² The fiscal revenues of Hilandar in 1300 were 580 hyperpyra and of Zographou in 1320 were 138 hyperpyra: *Esphigmenou*, p. 22.

¹⁶³ See *Iviron*, 3: no. 70 (1301), line 316: 64 modioi of land in Kato Bolbos are rented by the monastery to *xenoparoikoi*; cf. *ibid.*, lines 387–88.

¹⁶⁴ See Lefort, "Rural Economy," 295.

¹⁶⁵ The figures differ from those of Svoronos, "Lavra," 4:170–71, because of different assumptions regarding crop yield, the payments of the *paroikoi* and the proportion of cultivated and fallow land in the two-year rotation.

In reality, it would be much higher because the monastery would not have had to share the production coming from *corvée* labor.

This amount is already much higher than the dues of the *paroikoi*. Is it realistic? That is, was the labor force of Lavra capable of leasing this land and putting it under cultivation? It would seem that it was, for there were 880 households, with 250.5 *zeugaria* and 169 *boidia*—that is, 61 modioi of land per household and 80 modioi per ox. This is certainly a high ratio of land to oxen. In Greece, in 1875, the proportion of oxen to families was 0.73, that of oxen to land was one pair of oxen to 44 *stremmata* of arable (a *stremma* is more or less equivalent to a modios), certainly very different from the ratio in fourteenth-century Macedonia.¹⁶⁶ The peasants of Lavra who owned a full team would be cultivating land much in excess of 80 modioi, and the monastery also had its own teams of oxen for the use of its *paroikoi*. The revenues mentioned above should be taken only as an order of magnitude, and it should also be noted that expenses—for example, the cost of the oxen—have not been taken into account.

The resources of the large estate, apart from the labor force, consisted, first of all, of land. The monastery of Lavra was one of the greatest proprietors, although the properties of the Kantakouzenoi, on which we do not have detailed information, may have been as large or larger before the great civil war. In 1321 Lavra had approximately 185,000 modioi (18,500 ha) in the theme of Thessalonike, the theme of Strymon, and the island of Lemnos. Much of this land came from imperial donations; some was bought by the monastery. It was the same with other monasteries, which also profited from the donations of individuals.¹⁶⁷ Sales or donations could involve the tiny plots of peasants or large and functioning estates. The composition of the large estate and the process of its creation is the same whether we are in Asia Minor, Thessaly, or Macedonia. In 1234 the emperor donated to Lembiotissa an imperial *zeugelateion* near Palatia: it had 5 *zeugaria* of cultivated land, and one *zeugarion* of pasture land.¹⁶⁸ A large estate would include arable land, pasture and meadow lands, vineyards, olive trees in Asia Minor and the Peloponnese, fruit trees elsewhere, threshing fields, gardens, mills, fishing boats, beehives, flocks, and urban real estate.¹⁶⁹ Large landlords also had the necessary equipment for the processing of agricultural products, for example, mills,

¹⁶⁶ A. Mansolas, *Ἀπογραφικαὶ πληροφορίες περὶ γεωργίας κατὰ τὸ ἔτος 1875* (Athens, 1876), 39, 41. My own calculations from his data show one pair of oxen to 54 *stremmata* of land. I thank S. Petmezas for this reference.

¹⁶⁷ See, for example, *Iviron*, 3:61 (1273), 72 (1310): the monastery buys arable land of 1,000 modioi from the *sebastos* Ioannes Amaseianos and receives a donation of 1,000 modioi from Andronikos II, taken from the lands of the lay proprietor Theodore Masgidas.

¹⁶⁸ See MM 4:146–50. The *zeugarion* here is a unit of measurement, denoting the amount of land that one can cultivate with one pair of oxen in one year. On Lavra, see *Lavra*, 4:170; the archives of the monastery of Lembiotissa in Asia Minor, of Xeropotamou, and of Hilandar contain numerous acts of sale and donation by individuals. Sometimes the land purchases were important in quantity: before 1338, the monastery of Xenophon had bought 3,550 modioi of land from the heirs of the *sebastos* Sgouropoulos: *Actes de Xénophon*, ed. D. Papachryssanthou, Archives de l'Athos (Paris, 1986), no. 25.

¹⁶⁹ Among the many possible examples, see *Iviron*, 3: no. 58; MM 4:18–22; Zakythinos, *Despotat*, 2:187.

and presses for olives and wine,¹⁷⁰ both in the countryside and in cities such as Thessalonike, a sure sign of the commercialization of production. According to a chrysobull of Michael VIII, the estates of Nea Mone on Chios included, along with arable land, pastures, vineyards and olive trees, buildings, two bathhouses, warehouses near the sea (another sure sign of commercialization), and boats.¹⁷¹

Monastic landlords exhibited considerable rationality in the way they enlarged their possessions. They acquired pasture land to diversify their production and complement their possession of arable. This was the case of Lavra, which, between 1300 and 1321, added to its considerable arable lands pasture lands and a large number (632 modioi) of vineyards.¹⁷² The monastery bought or otherwise acquired pieces of land contiguous to its existing possessions. Thus, for example, the monastery of Iveron bought, in 1273, 1,000 modioi of arable land close to its domain of Radolibos and made other purchases in the area as well.¹⁷³ An imperial donation of land in Malouka led to quarrels between the monasteries of Iveron and Hilandar, so the emperor proceeded to an exchange, whereby Hilandar received the 1,000 modioi that had originally been granted to Iveron, but the latter monastery got another 1,000 modioi, close to the land it had bought in 1273.¹⁷⁴ This rounding out of properties had a double function, juridical and economic: it protected the domains and enabled the landlords to expand further, through the application of the law on *protimesis*,¹⁷⁵ while it also made it easier and more profitable to exploit lands that were geographically close, that is, it created a more integrated domain. The interplay between the law of *protimesis* and the acquisition of contiguous parcels by monasteries continues through the late fourteenth century in Macedonia.¹⁷⁶

Urban real estate was important to great landlords, if the examples of monasteries, on the one hand, and John Kantakouzenos, on the other, are typical. The city of Serres was at the center of a fertile area, with production of grain and wine and with cattle, other animals, and fishing. Both lay and ecclesiastical proprietors had properties here, including buildings, bakeries, and shops, some of which were rented out.¹⁷⁷ The monastery of St. John Prodromos was the most important monastic proprietor in Serres, where it owned, among other things, seven mills, shops, and a bakery.¹⁷⁸ But other monasteries had possessions there, such as the monastery of Philotheou, which, in 1346, had two water mills, vineyards, and arable land along the river close to Serres and buildings in the city.¹⁷⁹ The monastery of Pantokrator acquired, through a donation made by a member of the lower aristocracy, three workshops in the *emporion* of

¹⁷⁰ See, for example, *Iviron*, 3: no. 84.

¹⁷¹ See, for example, *Iviron*, 3: nos. 76 (1320), 84 (1326). For Nea Mone, see MM 5:10–13.

¹⁷² Svoronos, "Le domaine de Lavra," 170.

¹⁷³ *Iviron*, 3: no. 61, and Introduction, p. 15.

¹⁷⁴ *Iviron*, 3: no. 72, and *Chilandar*, nos. 41 and 37, and introduction to *Iviron*, 3:18.

¹⁷⁵ See E. Papagianni, "Protimesis (Preemption) in Byzantium," *EHB*.

¹⁷⁶ See, for example, *Chilandar*, no. 192 (1392), and *Esphigménou*, nos. 30 (1393), and 29 (1388).

¹⁷⁷ *Kuthumus*, no. 18 (1338); donation of Theodora Kantakouzene.

¹⁷⁸ *St. Jean Prodrome*, nos. 4, 25.

¹⁷⁹ *Philotheé*, no. 9.

Serres and two bakeries in the *kastron*.¹⁸⁰ The large number of water mills in the city suggests that there was processing of grain, while it is also probable that there was production of woolen cloth.¹⁸¹ We do not know with certainty whether the great proprietors, in addition to renting out their workshops, also processed their production here, but it is not unlikely. Great proprietors also had real estate in the city of Thessalonike, including houses and workshops that they rented out. The metropolitan church, for example, in the early fifteenth century, possessed perfume shops in Thessalonike, which it rented out.¹⁸² The monastery of Xenophon had five grocery stores and three large houses, which, in 1419, had been turned, by the tenant, into a huge and prosperous wine shop.¹⁸³ The monastery of Iveron made a deliberate effort to acquire real estate here, buying, among other things, winepresses, gardens, and bakeries (between 1314 and 1326).¹⁸⁴ The importance of the presence of great proprietors in the cities is treated elsewhere,¹⁸⁵ the only point of interest for us here being the suggestion that the cities played a role in the economic integration of the large estate.

A global view of the large estate in this period suggests that a successful enterprise would have both a complementary agricultural economy and a considerable involvement in the processing of agricultural products. The large estates of Macedonia produced grain, wine, and the products of animal husbandry. Estate owners could press their wine in their own winepresses, thresh the grain in their own threshing grounds or those of their *paroikoi*, and mill their corn in their mills or those of their *paroikoi*. They also, however, collected rents: not only from the arable land leased to their *paroikoi*, but also from urban real estate. The major constraint on the economic activities of large landed proprietors was the availability of labor, which some of them had in sufficiency, but others did not. The large proprietors were wealthy, but not very numerous, even in the first half of the fourteenth century. There were also the proprietors with properties of medium size, whether they held them on privileged terms or not. Such properties seem to have prospered in areas in or near cities. They will be discussed in connection with investments.

Investments and Land Improvement

Two aspects are important here: one, of considerable significance for any agrarian economy, is the question of land improvements and cultivation of uncultivated lands;

¹⁸⁰ *Kutlumas*, no. 8. Vatopedi also had possessions in the *emporion* of Serres: W. Regel, *Χρυσόβουλλα καὶ γράμματα τῆς ἐν τῷ Ἁγίῳ Ὁρει ἱερᾶς καὶ σεβασμίας μεγίστης μονῆς τοῦ Βατοπεδίου* (St. Petersburg, 1898), no. IV (1329), pp. 16–17. Cf. K.-P. Matschke, “The Late Byzantine Urban Economy, Thirteenth–Fifteenth Centuries,” *EHB* 465.

¹⁸¹ See A. Laiou, “Κοινωνικές δυνάμεις στὶς Σέρρες στὸ 14ο αἰώνα,” in *Οἱ Σέρρες καὶ ἡ περιοχή τους ἀπὸ τὴν ἀρχαία στὴ μεταβυζαντινὴ κοινωνία* (Serres, 1998), 203–19, and Matschke, “Urban Economy.”

¹⁸² S. Kugéas, “Notizbuch eines Beamten der Metropolis in Thessalonike aus dem Anfang des XV. Jahrhunderts,” *BZ* 23 (1914/19): 148.

¹⁸³ *Xénophon*, no. 32.

¹⁸⁴ *Iviron*, 3:18–19.

¹⁸⁵ Matschke, “Urban Economy,” 457.

the second is the question of what were the crops or agricultural activities in which various categories of people invested. In the earlier part of the period, down to the middle of the fourteenth century, there were investments in the planting of vineyards, vegetable gardens, fruit trees, and perhaps olive trees, the restoration of some arable to production, the establishment of fisheries, and the erection of water mills.¹⁸⁶

All these activities constituted what the Byzantines called βελτίωσις, improvements that increased the productive capacity of the land, or, more generally, the revenues of a holding, which was, after all, what most interested the fisc, where the term probably originated. The term βελτίωσις did not apply only to land improvement but also, as I have indicated, to the erection of a mill, or even the restoration of urban properties and the restoration, in some cases, of small churches¹⁸⁷—the main point being that restoration made the restored property productive. In the period we are examining, a number of official, imperial donations of land to the church or to individuals includes permission to make “improvements” on the land, meaning, as far as the fisc was concerned, that the increased revenues would not be claimed or taxed by the donor.¹⁸⁸

There were a number of possible investors in such “improvements”: the landlord (lay, ecclesiastical, the state), the peasant who may have owned the plot of land on which improvements were made, or the peasant who made improvements on lands he did not own; and others, whose primary occupation may have been trade, for example, but who also invested in land. Given the structure of the Byzantine countryside, where the large exploitation coexisted with family plots and with plots of medium size, it is important to see what each category could and did invest in and in what form.

Cereal Cultivation It may be taken as given that land for cereal cultivation was always an important asset and that there was investment in the sense of acquisition of arable land. When it comes to investment that increases productivity or production, the melioration of arable was the most expensive investment in terms of capital. Apart from the original investment in land, one needed oxen, or other draft animals, and plows, as well as labor. The melioration of arable seems to have needed three years to come into effect. At least, this is indicated by the chrysobull of John VII, which gives to the monks of Dionysiou the abandoned *palaiochorion* of Mariskin with the promise of bringing into production, within three years, a surface of two *zeugaria*.¹⁸⁹ Other kinds of melioration, for example, planting vineyards, would have taken longer to bear fruit:

¹⁸⁶ Cf., on trees, *Chilandar*, no. 19. On olive trees and the *vivarion*, MM 4:1–4 (1228). On gardens, *Chilandar*, no. 82 (1322). This is an agreement for the joint exploitation of a domain by two beneficiaries; it is stated that, if any improvements are made and the income is increased, the terms of the agreement will not be altered.

¹⁸⁷ *Iviron*, 3: no. 60 (1264), line 19: βεβελτιωμένη καὶ συνισταμένη.

¹⁸⁸ See, e.g., *Chilandar*, no. 132 (1343), to Manuel Mesopotamites; *Lavra*, 2: nos. 80, 82. The examples can easily be multiplied.

¹⁸⁹ *Dionysiou*, no. 10 (1408); cf. *Xéropotamou*, no. 28 (1407). In the donation to Dionysiou, the emperor promises to give them the two *zeugaria* (of land) with all their equipment, but the monks would have to find and establish their own *paroikoi*. Cf. *Dionysiou*, no. 13. For the three-year interval, cf. Constantine Porphyrogenitus, *De cerimoniis aulae byzantinae*, ed. J. J. Reiske, 2 vols. (Bonn, 1829–30), 695.

four years are mentioned in a document, but it probably took five to seven years.¹⁹⁰ Obviously, also, different kinds of land could be so planted: vineyards need good-quality land, whereas olive trees can grow on relatively poor soil. Placing uncultivated land under cereal cultivation seems to have been an enterprise that required some organization and probably was done more easily by relatively large units such as a monastery or the state, as we have seen in the case of John III Vatatzes.¹⁹¹ Some of the occasional references we have to such investments are connected with disputed rights, that is, with the cultivation of lands that belonged to other proprietors. In such cases, we often find the monastery, or lay landlords, providing the managerial organizational expertise, while their *paroikoi* provided the labor. In one case, it is said that the inhabitants of an entire village got together and sowed in one day a piece of land that belonged to the monastery of Lembiotissa, presumably so as to establish rights over the land.¹⁹² The extent and frequency of such investment varied with time and place. In the period of expansion, that is, still, in some areas, in the thirteenth century, the investment may have been significant. One also, however, has to keep in mind that the expansion of the cultivated land of large estates, for example monasteries, in the course of the thirteenth and the early fourteenth century, went hand in hand with the installation or acquisition of peasant households, which provided both the manpower and, to a large extent, the equipment, in terms of oxen and probably plows. It also often included domains that were in working order.

The size of estates played an important role in the possibility of and returns from investment in cereals. The Kantakouzenoi owned vast properties in Macedonia, especially in the rich Strymon valley. According to the undoubtedly exaggerated but nonetheless not implausible account of the emperor himself, his property included, among its liquid and movable assets, large numbers of oxen and other draft animals.¹⁹³ He lists 1,000 pairs of oxen, which were used in farming his estates. There were 50,000 pigs, producing, one might imagine, vast quantities of lard and meat, not to mention the bristles that were used by painters and those who decorated rich houses with frescoes;¹⁹⁴ there were also 70,000 sheep, again with a prodigious production of wool. There was, he says, an “incredible” quantity of crops, hard to estimate. There were 300 mules, 500 donkeys, and 200 camels. He lists 2,500 mares, which may have been used for breeding draft horses. As for the money he and his mother lost, in Constantinople and other cities, neither he nor anyone else could tell how much it was, which means that it was so much that, again, it could not be estimated.¹⁹⁵ The large number

¹⁹⁰ A document of 1424, in which the monastery of Docheiariou gives uncultivated land to Dionysiou (which disposes of a larger labor force) to plant with olive trees and vineyards, and to build a water mill, expects revenues to start after three years. This may be sufficient for the vineyards and the watermills, but not for the olive trees. See also MM 2:506–9.

¹⁹¹ See above, 314–15.

¹⁹² See MM 4:187–89 (1228), 141–2, 145, 146–50; MM 4:17.

¹⁹³ Kantakouzenos, 2:192.

¹⁹⁴ V. Tsiouni, *Παιδιόφραστος Διήγησις τῶν ζῶων τῶν τετραπόδων* (Munich, 1972), verses 396–401.

¹⁹⁵ Kantakouzenos, 2:184–5.

of oxen may have included the oxen of his *paroikoi*, but also his own. In cases such as these, any clearance of arable for cultivation could well have been organized and carried out with significant investment of funds, equipment, and organizational know-how on the part of the landlord.

For large estates, such investment was certainly profitable. I am aware of the fact that there is considerable resistance to discussing the profits of investments in societies where auto-consumption plays an important role. Nevertheless, some structural traits may be revealed by our necessarily incomplete calculations. I have already suggested that the monastery of the Great Lavra might receive, from cereal cultivation, revenues amounting to 13–15% of the value of the land.¹⁹⁶ These figures must not be taken at face value, but rather as an order of magnitude. It should also be remembered that they do not include the cost of oxen and equipment owned by the estate holder and that they are, in a sense, fictitious and do not represent true return on investment, since Lavra held most of its lands not by purchase but by donation. They are simply given here to show that an increase in arable lands, and cereal cultivation generally, was indeed profitable to the great landlord, with an adequate labor force. The great landlord also had the possibility of deploying his labor force in a number of ways, for example, allowing the peasants to work the land of others, and drawing revenues from it, or having them work on different parts of his estates, or renting out their oxen.¹⁹⁷

It was, I think, different in the case of landlords with medium-sized estates. An example of the kind of investment in which such landlords engaged may be found in the estate of the *sebastos* Kosmas Pankalos, around Serres. It consisted of arable, vineyards, and real estate in Serres, including houses, a winepress, and two bakeries. What he himself had added to the estate, in the form of melioration, was vineyards, houses, the winepress, and one bakery, not arable.¹⁹⁸ The best-studied case is that of Theodosios Skaranos, who turned his estate into a monastic endowment. According to his testament, written in 1270–74, he had 270 modioi of arable land, mostly though not entirely from donations, and 24 modioi of vineyard. He also had some income from and presumably the services of 11 households of *paroikoi* who owned no land, and paid a total of 9.75 nomismata in tax. Only one of his *paroikoi* had a pair of oxen and a piece of vineyard, while another had a donkey. The others were without any resources.¹⁹⁹ In the case of Skaranos, it is possible to attempt a highly speculative and in the end incomplete analysis of investment, cost, and revenues. In terms of labor power and equipment, Skaranos had 3 buffaloes, 2 oxen, 1 donkey, 2 horses, and agricultural equipment. I assume that his investment would have consisted of the price of the work

¹⁹⁶ Above, 343.

¹⁹⁷ As, e.g., in *Zographou*, no. 33 (1342), p. 78: the oxen of the monks of Zographou are working on the land of others.

¹⁹⁸ *Kutlumus*, no. 8; cf. nos. 7, 18.

¹⁹⁹ *Iviron*, 3: no. 59, lines 82–91; *Xéropotamou*, no. 9. On Skaranos, see J. Lefort, “Une exploitation de taille moyenne au XIII^e siècle en Chalcidique,” *Ἀφιέρωμα στὸν Νῆκο Σβορώνο* (Rethymnon, 1986), 362–72. Much of the data I am using comes from Lefort’s study; the attempt to estimate the cash equivalent is my own.

animals (36 nomismata for the buffaloes and oxen, 30 nomismata for the horse and donkey, a total of 66 nomismata)²⁰⁰ and the price of the agricultural implements (which is unknown, but for the sake of argument let us say 15 nomismata), for a total of 81 nomismata. In one year he had sown 153 modioi in winter and spring cereals; from that, if much, but not all of his land were first quality (yield 1:5), he would have gotten 405 modioi of wheat, 135 modioi of barley, and 225 of rye per year, which in monetary terms would give a gross revenue of 36.45 or 54.7 nomismata (the higher price results from the use of a higher estimate for the price of cereals).²⁰¹ Depending on the figures one uses, this would represent a return of 13%, 22%, 20%, or 33% on the cost of the land, a fictitious figure. In terms of returns on his investment of 81 nomismata, they would be 44–67%.

These enormous figures, however, are meaningless, for they do not take expenses into account. If we assume that one-fifth of his grain would go toward the next year's seed, and also assume, gratuitously, I admit, a depreciation of animals and equipment of 10% per year, his revenues from cereals drop to 21 or 35.6 nomismata a year, which still looks like a sizable sum. However, this is net revenues *except for the cost of labor*—unfortunately an unknown factor. There were twenty-eight peasants working for him, none of them possessing a piece of arable land. If they had to be fed from the revenues of the estate, the estate would be running a deficit.²⁰² In order to realize even a 4% profit on his investment of 81 nomismata, he would have to have, net of all expenses, 3.24 nomismata, something impossible if the peasants, too, made their living from this land. However, we know that, in the year he died, Skaranos, after having fed the fourteen monks of his monastery, had a disposable 200 modioi of wheat, which, as Lefort has indicated, may represent more than a year's reserves. His peasants must not have been dependent on just the work on his estates, although it is not at all clear how they made their living; perhaps they worked as day laborers. In any case, it must be assumed that some unknown part of the revenues of this estate, perhaps a considerable part, went to the cost of labor.²⁰³ The only thing that is clear from what has been said above is that, for an estate of this size, the profitability of investment in cereals was not very high and was helped by the fact that the land had privileged status (Skaranos had

²⁰⁰ I have estimated the price of the buffaloes to be the same as that of the oxen, and used the figure 9 nomismata each, according to MM 4:402–4 (he had 3 buffaloes, but I only included two because the third, a young beast, was clearly estate-bred); for other prices, see C. Morrisson and J.-C. Cheynet, "Prices and Wages in the Byzantine World," *EHB*. For the price of the horse and donkey I have used the figure 15 hyperpyra.

²⁰¹ My assumptions for the price of cereals are that barley would be worth about 33% less than wheat (see Morrisson and Cheynet, "Prices," tables 5 and 6), and rye might be worth half the price of wheat; the high and low price of wheat is 0.06 nomisma per modios in the place of production, and 0.09 nomisma per modios as an average. I have estimated the price of land as 1 nomisma per modios (*ibid.*) or 0.61 nomisma (*Lavra*, 4:169 n. 647).

²⁰² If we assume 15.5 modioi (201 kg) of grain per person per year (Lefort, "Rural Economy," 295), this would come to 434 modioi.

²⁰³ For the difficulties of estimating the cost of *corvée* labor, see above, 329–30. One rough and ready substitution for it might be the living costs of the worker and his family, which is what I have used here.

not bought most of it and paid no taxes on it) and a captive labor force. The modest prosperity of his estate must have owed more to his wine production. Skaranos did not, as far as we know, invest in any improvement of his arable land.

In sum, the cultivation of cereals was essential but not highly profitable, except for the great landlords who realized large surpluses that they marketed. Their profits depended in part on the absence of taxation and the enforced availability of a labor force. For a proprietor with a middle-sized holding, the profitability of cereals seems lower. For a peasant, 80 modioi of land might represent the breaking point of profitability. As for investment in the expansion of cereals cultivation, it profited the landlord more than the peasant, if, indeed, such a statement is meaningful in conditions where the cultivation of arable is essential for survival.

High-Yield Activities Other crops or activities of the agricultural economy were more profitable. The Byzantines recognized such assets, which they called *autourgia*, that is, properties that, after an initial outlay of capital (and labor), produced on their own, without further expense. This category includes vineyards, mills, pastures, brick kilns, and salt pans. The conservative eleventh-century landowner Kekaumenos advised people who wanted to invest in land to create *autourgia* as the most profitable way of going about their business.²⁰⁴

It will be noted that vineyards and pasture lands are in a different category from mills and ovens: the first form part of the primary economy of production, whereas mills and kilns take us into the secondary sector of the economy, that of processing of agricultural products and artisanal activity. It will also be noted that the perceived cost-free nature of *autourgia* stands only if one does not count labor as an expense. Indeed, in the Byzantine agricultural economy, where there was no labor market of any consequence (despite the existence, at all times, of hired hands), one can understand how the very considerable labor needed to maintain a vineyard, or the labor of the miller, was not taken into account by those who thought about profitable rural enterprises. Presumably, *autourgia* were considered “cost-free” because they did not need expensive animals and equipment (oxen, plows), and also because neither viticulture nor the cultivation of olive trees and gardens requires the annual investment of seed necessary in the cultivation of cereals. Finally, the absence of labor costs in the calculation of the profitability of *autourgia*, as the Byzantines saw it, is particularly appropriate to an economy where the landlord leases out this property and thinks of his revenues as net profit (apart from taxes); the labor was a cost only to the lessee.

The planting of vineyards, trees, and gardens and the erection of mills may be considered as capital investments in the sense that they increased the productive capacity of the land on which they were planted or erected.²⁰⁵ The most important investment

²⁰⁴ Rhalles and Potles, Σύνταγμα, 2:593–95; Πεῖρα Εὐσταθίου τοῦ Ῥωμαίου 38.74 (= Zepos, *Jus*, vol. 4). *Sovety i rasskazy Kekavmena*, ed. G. G. Litavrin (Moscow, 1972), 188.

²⁰⁵ See A. Laiou and D. Simon, “Eine Geschichte von Mühlen und Mönchen: Der Fall der Mühlen von Chantax,” *Bullettino dell’Istituto di Diritto Romano*, 3d ser., 30 (1992): 645, 655, 656.

of this type was made in viticulture, as the well-known Mediterranean complementarity of bread and wine would suggest. Much of the available information concerns gardens, vineyards, and mills, but we may assume that very similar circumstances obtained for the planting of olive trees and fruit trees. The profitability of investment can sometimes be estimated.

Gardens. These provide interesting indications of the rate of profitability and return on investment due to improvements in highly productive land. The main information comes from a case that involves a vegetable garden (κηποπεριβόλιον) just outside Thessalonike in the early fifteenth century. The land (whose extent, unfortunately, is unknown) belonged to the monastery of Iveron, which had rented it out to gardeners from Thessalonike for an annual sum of 59.5 hyperpyra, plus some dues in kind.²⁰⁶ In 1404, when Thessalonike returned to Byzantine sovereignty, the monastery leased out the entire piece of land to members of the well-known and well-connected family of the Argyropouloi, at an annual rent of 30 hyperpyra. The monks were later to claim that the low rent was due to the venality of the agent, the *ekklesiarches* Theodoulos, who was bribed. The Argyropouloi proceeded to effect improvements (consisting primarily of irrigation) on this land, mostly at their own expense, and with the use of hired labor.

The cost of the improvements was given differently by the two parties. The Argyropouloi claimed that they had spent 17,000 aspra, that is, 1,214 hyperpyra; of this, 15 hyperpyra had been in fact absorbed by the monastery, since the Argyropouloi had kept back half a year's rent. However, according to the inquiry conducted *in situ*, with calculation of the cost of labor and materials, the Argyropouloi had spent only 59 hyperpyra and 4 aspra. The difference is, of course, immense. If the Argyropouloi were telling the truth, they had invested 1,199 hyperpyra (1,214 minus the 15 they had retained from the monastery), whereas according to the monks they had spent only 44 hyperpyra. Both claims are undoubtedly exaggerated. Where there is no dispute is the increase in revenues. The Argyropouloi sublet the garden to the same gardeners who had held it before, first at an annual rent of 86 hyperpyra, which, by stages, became 115 hyperpyra (the dues in kind stayed the same). The rent of 115 hyperpyra is said to have been in effect "for many years." Thus the improvements had increased the revenues of the garden from 59.5 to 115 hyperpyra, an increase of almost 100%. This must have been a true increase of productivity, since the gardeners did not complain.

As for the returns on investment, the Argyropouloi ended up with a yearly income of 85 hyperpyra (115 minus the 30 they were paying to the monastery). If they had invested 44 hyperpyra, this is an immense return of 193%. Even if they had spent 1,199 hyperpyra, as they claimed, surely inflating their sums, they would have had a net profit of 7% a year, not at all a negligible sum, since it was risk free. We do not know the time limitation of the contract, but it was clearly long term, since its terms

²⁰⁶ *Iviron*, 4: nos. 97 (14 April 1421), and 98 (1 June 1421). On this, see K.-P. Matschke, *Die Schlacht bei Ankara und das Schicksal von Byzanz* (Weimar, 1981), 160ff, and A. P. Kazhdan, "Novye materialy po vnytrennei istorii Vizantii," X-XV vv., *VizVrem* 13 (1958): 307.

were disputed seventeen years later. In the first case, they would have recovered their investment during the first year; in the second case they would have recovered it in fourteen years.

The decision of the judges (*katholikoi kritai*) of Thessalonike, confirmed by Emperor Manuel II, was to return the garden to the monastery. The Argyropouloi were allowed to keep their revenues of the last seventeen years, as long as they did not contest the decision. This great dampener on initiative, if it is at all generalizable, shows a very conservative attitude on the part of the monastery, a sure disincentive to the entrepreneurial spirit. In any case, the profitability of investment in improvements, and the way in which it could be realized, are evident here.²⁰⁷

Olive Trees The profitability of other crops or activities can sometimes be measured and sometimes not. Olive trees, in the Peloponnese, as in western Asia Minor, were a valued asset, and olive oil must be assumed to have been both profitable and marketable. In antiquity, olive trees might produce four liters of olive oil per year. In 1834, a bad year, olive trees in Olympia, in Greece, produced 1–3 *okades* (1.3–3.9 kg) of oil per tree, with the mode being around 2 *okades*. In a good year, this would be at least double, with a minimum yield of 2.6–7.8 kg per tree.²⁰⁸ Note that olive trees produce every two years. It has been estimated that a highly productive olive tree in Byzantium would yield a return on investment (i.e., to the price of the tree) of 20–25%. The only cost incurred after the initial investment would be labor, which is intensive during short periods of the year.²⁰⁹

Mills. We can calculate the worth of mills a little more closely.

Revenues (gross)

1282	8 nomismata (average)
1282	16 nomismata (average)
1282	17.5 nomismata ²¹⁰
1321	12 hyperpyra (average) ²¹¹
1383	40 hyperpyra (very devalued) average rent ²¹²

Tax

In the early 14th century: 1 to 2 hyperpyra, with other figures (e.g., 3) also given; average ca. 2 hyperpyra

Cost of Building a Mill

Hard to estimate; one mention of 50 (devalued) hyperpyra²¹³

²⁰⁷ A not dissimilar case, concerning urban real estate in Thessalonike, was decided in favor of the monastery in 1419: *Xénophon*, no. 32.

²⁰⁸ G. N. Metrophanes, “Φορολογικὸ καὶ γαιοκτητικὸ καθεστὼς τῆς ἐλαιοκαλλιέργειας στὸ Ἑλληνικὸ κράτος (1821–1860),” *Ἱστορικά* 20 (1994): 85ff. Cf. Lefort, “Rural Economy,” n. 132.

²⁰⁹ Morrisson and Cheynet, “Prices,” 822–23.

²¹⁰ P. Delehay, “Deux typika byzantins de l’époque des Paléologues,” in *Synaxaires byzantins, mémoires, typika* (London, 1977), art. 6.

²¹¹ *Chilandar*, no. 92.

²¹² MM 2:82, in Constantinople.

²¹³ *Kuthumus*, no. 35 (1377).

The returns on investment of a mill cannot be estimated given the uncertainty of the costs of construction. On the other hand, we do know that a mill pays the same tax as 100 modioi of best-quality arable land. The gross annual revenues of 100 modioi of best-quality land ($\frac{5}{8}$ of which would be cultivated) would be 28–31.5 hyperpyra. Against this revenue, however, one would have many expenses, including the seed, the price of the land, and the oxen, whereas the expenses of the mill would basically be the costs of labor. The annual revenue versus annual cost, then, would compare very favorably for mills, which seem to have been a coveted piece of property.

Vineyards In the case of vineyards, if we take the tax as a measure of the economic value of goods, we find that in this period the value of a piece of vineyard was, roughly speaking, eight to twelve times that of the best-quality arable land.²¹⁴ This is corroborated by the land prices, which are few and disparate for vineyards, and thus cannot be precisely calculated, but which in any case show a difference of a factor of 5.5 to 10 between vineyards and arable land. The value of deserted vineyards increased two or ten times when the land was planted.²¹⁵

Investment in *autourgia* was made by much more variegated categories of people than melioration of arable land. Landlords of some magnitude, both lay and ecclesiastical, cleared land for vineyards and olive trees, and erected mills, “at their own expense” or “at great expense.”²¹⁶ Sometimes the expenses of planting a vineyard are detailed.²¹⁷ Along with the great landlords, proprietors of more modest means also planted vineyards and built mills: Theodosios Skaranos had 24 modioi of vineyard, 8 modioi of which he himself had planted. Another proprietor of similar scale but with a different portfolio, Theodore Karabas, who lived in Thessalonike, had 61 modioi of vineyard; some of this came from the purchase of a piece of vineyard planted by Man-

²¹⁴ See Svoronos, “Le domaine de Lavra,” 158–60, and *Iviron*, 3:153; Lefort, “Fiscalité,” 63ff. I am comparing here only the base tax, which may be considered a fair indicator of comparable economic value. For tables showing value and tax rates of various types of property, see Schilbach, *Byzantinische Metrologie*, 235–63, which must be used carefully: see Morrisson and Cheynet, “Prices.”

²¹⁵ Eight to twelve times if we take taxation as an index, for in most cases the deserted land (for vineyards) was taxed at $\frac{1}{50}$ hyperpyron per modios, although in one case the tax was $\frac{1}{8}$ hyperpyron (*Iviron*, 3: no. 77). In 1384 the value of deserted vineyards was estimated at $6\frac{2}{3}$ hyperpyra per modios, which increased to 10 hyperpyra after the vineyards were made productive: *Docheiariou*, no. 49 (Morrisson and Cheynet, “Prices,” table 7). A document of 1295 claims that 18 modioi of (planted) vineyard had a value of more than 300 nomismata, i.e., an average value of 16.67 nomismata per modios. *Iviron*, 3: no. 67. Cf. Oikonomides, “Role of the State,” 1012.

²¹⁶ See, e.g., the property of G. Phokopoulos, which he had “from purchase and from his own labor and expense”: *St. Jean Prodrome*, no. 44 (1352); the monks of St. Nicholas, near Serres, built four water mills: *Chilandar*, no. 20 (1319); in 1292, the Sebastos P. Doukopoulos mentions a water mill he had built on his *pronoia* land: *Iviron*, 3: no. 66; the monks of Iveron plant a vineyard on their own land: *Iviron*, 3:67 (1295). The monks of Hilandar build a mill: *Chilandar*, no. 115 (1327). In 1374, the *megas primikerios* John and Anna Asanina Kontostephanina give to Pantokrator part ownership of a vineyard that they had brought into cultivation: *Actes du Pantokrator*, ed. V. Kravari, Archives de l’Athos (Paris, 1991), no. 9. In 1309, a *stratiotes*, Georgios Kalameas, bought an already functioning domain, and added to it a mill; all of this, with its *beltioseis*, he gave to Iveron: *Iviron*, 3: nos. 71, 72. In 1405, Radosthlabos gave the monastery of St. Paul half his goods, which included vineyards he had planted: Lefort, *Villages de Macédoine*, 25. In 1312 the bishop of Lakedaimon built mills and planted olive groves and gardens: Zakythinos, *Despotat*, 2:187.

²¹⁷ *Iviron*, 3: no. 67, and, especially, MM 2:506–9.

uel Biblodontes, along with some deserted vineyards (in toto, 4 modioi), in 1296; when Karabas made his will, in 1314, there are no deserted vineyards mentioned in this location, so perhaps he, too, had invested in some planting.²¹⁸

The inventory of his properties may help illuminate the ubiquitous aspect of this investment in vineyards. Karabas had urban real estate and invested his money mostly in vineyards, of which he had 61 modioi, while only a small part of his fortune was invested in cereals. The structure of his property was very different from that of Skaranos, with the predominance of vineyards and the small size of the arable the most eloquent difference. The explanation is, quite simply, that the “domain” of Skaranos was geared to self-sufficiency with some commercialization of crops, whereas that of Karabas was very much geared to the market: wine was a good cash crop. Indeed, Karabas was also, perhaps primarily, a merchant.²¹⁹

Thus we have here a clear case of investment in vineyards as a cash crop. What his investment was, what the running costs (i.e., labor) were, how high his returns were are impossible to estimate, although we can figure out the market value of his vineyards, which would have been in the vicinity of $14 \times 61 = 854$ hyperpyra.²²⁰ When Karabas composed his will, he had in hand 300 measures of wine (about 3,120 liters), 30 tetartia (1,728 kg) of wheat, and 10 tetartia (576 kg) of millet.²²¹ Certainly, his 61 modioi should have produced a very great deal more than 300 measures, and therefore he must already have sold the year’s crop. The case of Karabas, although it does not give us a clue as to return on investment, shows the impulse behind the acquisition of vineyards, by melioration or by purchase, and it was a market impulse. The rise in the price of wine after 1300 undoubtedly helped.

Similar investments may be seen in western Macedonia, among a population of independent landed proprietors of middle fortune. A man from Berroia (Ioannakios Achyraites) addressed a letter to Demetrios Chomatianos in the early thirteenth century, to complain that his guardian, Basil Krasinos, had misused his property. The paternal property of Achyraites had consisted, among other things, of productive vineyards (of an uncertain surface) and 64 modioi of abandoned vineyards. These were placed under cultivation by his guardian. In one year, the productive vineyards produced 900 measures of wine, approximately 9,225 liters. The guardian effected improvements on the abandoned vineyards, which soon became productive again. It is not surprising to learn, from the same document, that Krasinos was also engaged in trade.²²²

²¹⁸ The will is published in *Chilandar*, app. I, no. 27; the act of sale, *ibid.*, no. 12.

²¹⁹ On Karabas, see Laiou, “Η Θεσσαλονίκη,” 188. For an estimation of his fortune (1,110 hyperpyra), see C. Morrisson, “Byzantine Money: Its Production and Circulation,” *EHB* 917–18.

²²⁰ *Chilandar*, no. 29, shows, for 1314, an average price of 14.5 nomismata per modios of vineyard. Cf. Morrisson and Cheynet, “Prices,” table 7. They suggest that the return on investment in vineyards was 3:1. On the wine produced by one modios of vineyard in the 11th century, see Lefort, “Rural Economy,” 250 and n. 163.

²²¹ The *tetartion* is equal to the commercial *pinakion*, i.e., to one-fourth of a commercial modios or 57.6 kg. See Schilbach, *Byzantinische Metrologie*, 108.

²²² J. B. Pitra, *Analecta sacra et classica spicilegio solesmensi parata*, 7 vols. (Paris-Rome, 1876–82), 6: no. 84; cf. Laiou, *Mariage*, 157ff.

The relationship between arable land and vineyards runs along the middle range of the continuum between self-sufficiency and the marketing of agricultural products. For the great landlords, investment in vineyards must have combined self-sufficiency and production for the market. But to the peasant also, the vineyard (as well as, but much more than, olive trees and mills) was important indeed. The peasants needed cash, to pay their taxes or to acquire a few luxury goods, and they, too, cultivated vineyards in order to produce a cash crop. They built mills presumably in order to have their own grain ground cheaply, but also as a revenue-producing asset, as may be seen by agreements with monastic landlords, by which the *paroikoi* who had built a mill pay a tax on it to the landlord.²²³ Vineyards, as well as other *autourgia*, were the investment of the peasant, from which he drew most of his cash, and which led him into the monetized, market part of the agricultural economy.²²⁴ The terms on which he held these assets, after he had created them, made a difference in terms of income and profit.

When melioration of lands took place by agreement between the landlord and the person carrying out the βελτίωσις, there was a sharing of revenues, in conditions that varied according to circumstances. In one case, the monastery leased lands, to be planted with vineyards, at an annual rent (*pakton*) of 1 hyperpyron per 10 modioi.²²⁵ In other cases, the agreement was that the landlord (the monastery of Lavra) and the man who built the mill would share the ownership and the revenues equally.²²⁶ In times when the landlord was admittedly incapable of making meliorations, because of lack of labor power, the share could be very different indeed: in 1424 an agreement between the monasteries of Dionysiou and Docheiariou provided for a share of four-fifths of the revenues of melioration going to the investor (Dionysiou) and one-fifth to the landlord.

In the many cases where vineyards were planted or mills were erected illegally, on land belonging to someone else, the arrangements again were different depending on circumstances and on the presentation of interlocking rights. In a significant number of cases, however, the resolution of the dispute would recognize that the investment involved in melioration gave rights of exploitation to those who had made the melioration. Thus, for instance, in 1294, despite the fact that a mill had been built illegally on

²²³ *Chilandar*, no. 19.

²²⁴ The documentation on peasant investment in vineyards is too abundant to mention specifically. See, for example, the case of a certain Glykys who had rented 10 modioi of land from Iveron to plant with vineyards: *Iviron*, 3: no. 67; in 1323, some peasants of Zagora sell to Hilandar a "newly planted vineyard" of 7 stremmata, which belonged to them "because they planted it" (ἐξ ἀναστήματος), at 50 hyperpyra: *Chilandar*, no. 93. A year later, a woman from the same area sold to Hilandar her vineyard for 135 nomismata; if the average price was the same as in 1323, she had a vineyard of 21 modioi, all ἐξ ἀναστήματος, of which she sold 19 modioi to Hilandar and kept 2 for herself: *ibid.*, no. 99. A *paroikos* of Hilandar builds a mill: *Xéropotamou*, no. 17. As for vineyards belonging to *paroikoi* in Macedonia ἐξ ἀναστήματος, see Laiou-Thomadakis, *Peasant Society*, table V-8. Cf. also, in Asia Minor: the *paroikoi* of Syrgares owned βελτιώματα (vineyards and trees) in hereditary right: MM 4:35–41. In the Peloponnese the investment of the peasant might be in olive trees and silk production.

²²⁵ *Iviron*, 3: no. 67.

²²⁶ *St. Jean Prodrome*, no. 31 (1334). On all that follows, see Laiou and Simon, "Eine Geschichte," 645ff, where one will find the full documentation and analysis of the various permutations.

land belonging to the monastery of Tzintziloukiotissa, and that there was no question in law of the rights of the monastery, the person who had built the mill was to retain two-thirds of it over two generations.²²⁷ In other cases, the fact that peasants or monastic landlords had planted vineyards on land belonging to another person or institution was sufficient to give them rights of exploitation and even of ownership, the justification being that otherwise “they would suffer much harm” (πολλὴ ὑπῆρχεν ἡ βελτίωσις αὐτῶν . . . καὶ μέλλει γενέσθαι ἡ θλίψις αὐτῶν πολλή) or much economic harm (ζημίαν). The arrangement might be that the meliorations were given over to those who had effected them, who might or might not pay to the landlord a tax—in the latter case, one may suggest that the persons affecting the melioration received rights of ownership. Thus the capital investments we are discussing created a presumption of ownership, which people were arguing to the emperor and to other mediating or judicial bodies, in Asia Minor as well as Macedonia, throughout the thirteenth and fourteenth centuries; indeed, similar cases are also known from areas that had passed out of Byzantine control.²²⁸

Among the independent proprietors of western Macedonia, the arrangements were similar in spirit. Deserted vineyards were bought and made productive “at great expense.”²²⁹ Land was turned from cereal cultivation to viticulture.²³⁰ Once the vineyards had been made productive, disputes sometimes erupted. In one case, the decision was very firmly in favor of the person who had effected the melioration, as opposed to the owner of the land: the investor would receive, throughout his lifetime, two-thirds of the wine, and the owner would receive one-third; he would get the entire vineyard after the death of the investor.²³¹

Clearly, the efforts to increase productivity and revenues could easily lead to conflictual situations, since not all land, after all, is easy to turn into vineyards, nor are all places equally appropriate for the erection of water mills. What is of interest here is not the legal parameters of these conflicts but their economic significance. Since such land reclamations were labor intensive, and depended primarily on the labor of peasants, it is important to note that the value of labor, although not directly calculated, nevertheless was recognized. In the cases where the *paroikoi* or other peasants acquired rights of ownership, the economic value of meliorations increased significantly: in such cases, what they had to pay out was only the tax ($\frac{1}{5}$ – $\frac{1}{8}$ hyperpyron per modios in early 14th-century Macedonia), quite a bit lower than what they would have had to pay if they were renting the vineyard or the mill, either in cash or through a revenue-sharing arrangement.

Peasant investment in vineyards could be extensive: sometime before 1300, the in-

²²⁷ *Esphigménou*, app. E; Laiou and Simon, “Eine Geschichte,” 648–49.

²²⁸ For the documentation, see Laiou and Simon, “Eine Geschichte,” 650ff. For the later period, see *Chilandar*, no. 162 (1356).

²²⁹ D. Chomatianos, Πονήματα, in Pitra, *Analecta* (as above, note 222), 6: no. 105 (involving an inhabitant of Vodena).

²³⁰ *Ibid.*, no. 82.

²³¹ *Ibid.*, no. 82, p. 366.

habitants of the village of Abramiton, in the Chalkidike, planted 400 modioi of new vineyards, a very substantial investment.²³² Vineyards were often an object of land transaction, being sold either under duress, in times of hardship,²³³ or perhaps for profit.²³⁴ Thus investment in potentially cash-producing assets was in the hands of peasants as well as lay and ecclesiastical landlords, with the peasants investing primarily labor, and the landlords sometimes investing land, and, when they undertook and organized the melioration themselves, funds (for paying day laborers, for example), protection (either on their own domains or, even, by sending their peasants out to cultivate the lands of others), and a certain managerial expertise. Landlords with middle-sized holdings were also investing in vineyards. Returns on such investments were, as we have seen, higher than on arable, and to a certain degree they were shared by peasants and landlords. But the relative worth of these investments was probably greater in the case of the peasants, who were able to exploit these small parcels of revenue-producing land; indeed, investments in vineyards (and the other investments peasants could make) are a significant indication of adaptability and perhaps a response to market demand.²³⁵ The same observations, *mutatis mutandis*, hold true for olive trees in Asia Minor, and, I suppose, in the Peloponnese, and for raw silk production in the Frankish and Venetian Peloponnese. The importance of these investments was greatest through the middle of the fourteenth century, as long as the economy remained articulated and labor was relatively adequate.

The Disarticulation of the Agrarian Economy

The productiveness and prosperity of the agricultural economy until the middle of the fourteenth century could not be sustained thereafter. The political and military events briefly outlined above²³⁶ were overwhelming. Wars, raids by Turkish piratical expeditions, and looting armies on land destroyed the security that, relative though it may have been, nevertheless existed earlier and was necessary for the economy. Monasteries began to build towers, to provide some security for people and foodstuffs.²³⁷ Part of the prosperity of the countryside had been the result of a relatively well articulated economy that involved exchange. After the middle of the fourteenth century, communications were badly disrupted. For example, the Via Egnatia became impassable and communications between Constantinople and Thessalonike were possible only by sea.²³⁸ First because of the great civil war and then because of the Ottoman incursions,

²³² *Xénophon*, no. 3.

²³³ For example, MM 4:399ff (1271), 402ff (1271), 408ff (1272).

²³⁴ This may be the case of the *paroikoi* of Lavra, inhabitants of the village Pinson, who, before 1321, sold 104 modioi of vineyard to some inhabitants of Thessalonike: *Lavra*, 3: no. 109, line 945; cf. lines 952–53.

²³⁵ Cf. the remarks of Aymard, "Autoconsommation," 1392ff, esp. 1395–96.

²³⁶ A. E. Laiou, "Political History: An Outline," *EHB*, 26ff.

²³⁷ See, e.g., V. Mošin, *Supplementa ad acta graeca Chilandarii* (Ljubljana, 1948), no. 7 (1353); *Dionysiou*, no. 13 (1414).

²³⁸ Laiou, "Η Θεσσαλονίκη," 185–86.

Table 6
Population and Resources of Villages of Macedonia

Village	Households	<i>Zeugaria</i>	<i>Boidia</i>	Land (in modioi)	Vineyards (in modioi)
1321					
Drymosyrta	56	16	11	—	—
Pinson and Loroton	103	57	19	11	325
Gomatou	104	13	15	32	121
1409					
Drymosyrta	35	11	—	—	—
Pinson and Loroton	20	2	—	—	—
Gomatou	21	—	7	—	—

cities were cut off from their hinterland for long periods of time, and the normal country-city exchange became dysfunctional.

The worst problem was the depopulation of the countryside, brought about by the wars and the outbreaks of the plague. The general picture of depopulation emerges from all the available sources, but details can be recovered only for a few areas. In Macedonia, we have the figures for three villages belonging to the monastery of Lavra. The comparison between the population and the resources in 1409 and 1321 is instructive (Table 6).

This stark picture of decline of human and animal resources is made even starker in the records for the island of Lemnos, where the monasteries of Lavra, Iveron, Pantokrator, Dionysiou, and others had domains. In the mid-fourteenth century, the lands of Lavra were extensive, indeed had increased. But in 1355 and 1361, when censuses were taken, the number of *paroikoi* had decreased precipitously (two families are mentioned in 1361).²³⁹ In the 1420s and early 1430s, a series of documents from the monastery of Dionysiou mention abandoned houses, old winepresses, abandoned vineyards, and deserted villages. The *paroikoi* of the monastery were few and far between. Revenues had declined to such an extent that the monastery was receiving, instead of revenues from the domain at Lemnos, subsidies in kind from the emperor: 16 modioi of wheat, 4 modioi of pulses, and 3 kantaria of cheese, truly pitiful amounts. In 1425 the emperor once again replaced this subsidy with a donation of land.²⁴⁰

²³⁹ *Lavra*, 4:147–48.

²⁴⁰ *Dionysiou*, nos. 21 (1425), 22 (1425), 25 (1430). Cf. *Iveron*, 4: no. 99 (1430–48). On Lemnos see also J. Haldon, “Limnos, Monastic Holdings and the Byzantine State, ca. 1261–1453,” in *Continuity and Change in Late Byzantine and Early Ottoman Society*, ed. A. Bryer and H. Lowry (Birmingham–Washington, D.C., 1986), 161–212.

People were few, and land was cheap. The price of land fell, as one might expect.²⁴¹ Indeed, land must have been virtually worthless toward the end of the fourteenth century. No wonder it was not taxed in the fifteenth century.²⁴² The price of grain rose, not only because of political instabilities that disrupted trade²⁴³ but also because of decline in production.

The lack of manpower may have given the peasantry a certain bargaining power. In Lemnos, in the 1420s, peasant households were given land by the monastery, sometimes added to land they already held. The *paroikoi* of Dionysiou on this island had a great deal of land: with one or two exceptions, each household had 300–400 modioi of arable, immense quantities compared to the amounts of land held or cultivated by peasants in the first half of the fourteenth century. It is quite clear that this land could not all be cultivated, especially since this documentation mentions no oxen or very few. Another document, undated, but from the late fourteenth or early fifteenth century, shows peasants receiving very large quantities of land from the state: households with up to 600 modioi of arable are mentioned, although no household owns more than a yoke of oxen, and indeed one man with 600 modioi has only one ox (but also two horses and two donkeys).²⁴⁴ Still, when oxen are mentioned on Lemnos, their ratio per household is relatively high, ranging from 0.8 to 1.5 oxen per household; in the few villages of Macedonia for which we have information in 1409, the ratio is 0.4, half what it was in 1321.

The areas for which we have relatively detailed information are all close to the coast—in the Chalkidike or on the island of Lemnos. It is legitimate to wonder whether the depopulation might have been less acute in the interior, where the plague would have penetrated less, and where the dangers posed by Turkish and other piratical incursions would also have been fewer. One also wishes for better information about western Greece and the Peloponnese. For the despotate of the Morea, the best we can do is recall that there are outbreaks of the plague attested throughout the second half of the fourteenth century and the first half of the fifteenth, that Kydones considered it an impoverished area, and that Plethon speaks primarily of the natural resources of the area, not of actual production. His reform proposals aim, among other things, at improving the poor condition of the peasantry, which may have been due to a decline in both manpower and production.²⁴⁵

The peasants who survived the disasters of the second half of the fourteenth century may have been affected less than the landowners, who suffered great loss of productive

²⁴¹ Morrisson and Cheynet, “Prices” table 4; the last two entries are very particular cases, since Constantinople was, at that time, under blockade, and the price of available land had skyrocketed.

²⁴² N. Oikonomides, “Ottoman Influence on Late Byzantine Fiscal Practice,” *SüdoStF* 45 (1986): 12–13.

²⁴³ E. A. Zachariadou, “Prix et marchés des céréales en Roumanie (1343–1405),” *Nuova rivista storica* 61 (1977): 291–306, shows stability in the price of grain during the first decades of the 14th century, and a sharp rise in the late 14th century.

²⁴⁴ *Pantocrator*, app., 189–96. Cf. Lefort, “Rural Economy,” 0:000.

²⁴⁵ Above, 318, and A. E. Laiou, “Economic Thought and Ideology,” *EHb* 115–20.

capacity. The great lay landowners met with reversals of fortune after the great civil war, losing much of their property. The Serbian conquest of Macedonia certainly cost a number of lay landowners their properties, but that did not necessarily have economic consequences. On the other hand, we know that when these lands came into Byzantine hands again, some landowners found that their estates had become unproductive and that they were not in a position to make them productive again. Such was the case of Anna Kantakouzene Palaiologina, who in the end had to sell her large domain to the monastery of Docheiariou for much too low a price.²⁴⁶ She ascribed the destruction of her estate to the Serbian occupation, but the problem, as she herself stated, was that the labor force had disappeared—surely a result of the general depopulation of Macedonia. It is also telling that she and her husband thought that only a monastery would have the possibility of restoring the capacity of the domain. Indeed, there was a certain reconcentration of economic power in the hands of the monasteries and out of the hands of lay proprietors throughout the late fourteenth and fifteenth centuries in Macedonia. Despite the fact that half the possessions of the Athonite monasteries were distributed to laymen as military *pronoiai* after the Byzantine defeat at the battle of the Marica in 1371, the monasteries soon emerged as the main stable economic power in the countryside. In the late fourteenth and early fifteenth centuries, there is, once again, transfer of land and resources from laymen to the monasteries.²⁴⁷ This was a trend that affected primarily the great lay landowners. The provincial landowners of moderate means but solid attachment to their cities and their lands may have profited from the upheavals and solidified their position. Such, at least, is the picture that emerges from the city of Serres in the late fourteenth century.²⁴⁸ It may also be the case in the Morea, where the notorious political independence of the local aristocracy may have had economic foundations.

By the early fifteenth century, there were efforts to redress the agrarian economy. These were undertaken by the state, which possessed lands (empty and uncultivated), could command some labor, and also had resources to invest from other activities, possibly from trade or from trade duties, even though these were also declining. In Lemnos as in Macedonia, Byzantine emperors distributed lands to the peasants and tried to give incentives for the restoration of land to cultivation. The beneficiaries were, once again, the monasteries. The donation of Mariskin, an abandoned village in Kasandreia, to the monastery of Dionysiou by Emperor John VII is an interesting indication of how bad things were and what the effort to redress them entailed. He gave the monastery the abandoned village, promising that within three years he would put a certain amount of that land into cultivation. For its part, the monastery would build a tower for defense; it would seek out peasants to install on the land, and the peasants would owe no taxes to the state (1408). Ten years later, the monastery had not yet built the tower. It was built by the despot Andronikos Palaiologos, who also promised to

²⁴⁶ *Docheiariou*, no. 42 (1373).

²⁴⁷ N. Oikonomides, "Monastères et moines lors de la conquête ottomane," *SüdostF* 35 (1976): 1–10.

²⁴⁸ Laiou, "Κοινωνικές δυνάμεις στίς Σέρρες," in *Οι Σέρρες και η περιοχή τους* (as above, note 181).

install men there and to give whatever else was necessary for the melioration of the domain. Two years after that, the land seems to be under cultivation; the monks then asked for more land and, promising to bring in new men, for land to be given them again, so that these peasants might make a living. The effects of depopulation are, therefore, still evident, as is the process of rehabilitation of a domain: it is an expensive enterprise, undertaken by the state and the landlords (primarily the monasteries), and its success depends on the ability to attract a labor force.²⁴⁹

The privileged position of the monasteries extended to the marketing of agricultural products. In 1408 Emperor Manuel II, who was then in Thessalonike, issued a privilege in favor of the monasteries of Mount Athos. The monks were given special conditions in which to market their products. They were relieved of the obligation to provide wheat for the biscuit of the seamen, thus retaining more of their surplus than did other landlords. They were relieved of the payment of taxes on flocks, which means that the products of animal husbandry came cheaper to them than to others. They did not have to pay tax on their wine sold in taverns. They were allowed to sell their wine in Thessalonike freely; the "monopoly" practiced by the governor of the city, that is, the practice of delaying the sale of wine until "his own" had been sold, was discontinued. Thus the monasteries were helped by the state in the marketing of their agricultural produce. They profited, too, from the fact that they held coveted real estate, near or in the cities, which they could rent out to entrepreneurial spirits like the Argyropouloi. However, the case of the Argyropouloi also suggests that the monasteries were rather conservative in their view of investment and profits.²⁵⁰

Despite the difficulties outlined here, the dwindling Byzantine territories did export both wine and grain in the late fourteenth century. They did so sporadically: Thessalonike, for example, cut off from its countryside over long periods of time, became an importer rather than an exporter of grain. But Byzantine Thrace exported grain to Genoa in the fourteenth and fifteenth centuries. The Peloponnese exported grain and other foodstuffs to Italy at the time Pletho was formulating his reform proposals. Emperor John V tried, in 1362, to protect the winegrowers of Thrace by forbidding the importation, into Constantinople, of the cheaper wine of the Peloponnese. He ascribed the high price of the wine grown in the area around Constantinople to the high costs of cultivating vineyards, which must refer to a shortage of labor.²⁵¹

The fact that there was, in certain areas, a surplus of agricultural products does not mean that the agricultural economy was healthy. It may have been the result of a number of factors. It is possible, for example, and indeed probable, that the population of the cities dropped more than that of the countryside; the relative decline in demand might create a surplus that would be exportable. There is also a simpler explanation:

²⁴⁹ *Dionysiou*, nos. 10, 13, 16, 17, 18, 20. See also the donations of John VII (1407) of the revenues of lands he improved in Kassandreia, to six monasteries: *Lavra*, 3: no. 159.

²⁵⁰ V. Mošin, "Akti iz svetogorskih arhiva," *Spomenik Srpska kraljevska Akademija* 91 (1939): no. 2, and cf. Laiou, "The Economy of Byzantine Macedonia."

²⁵¹ G. M. Thomas, *Diplomatarium Veneto-Levantinum*, 2 vols. (Venice, 1889; repr. New York, 1966), 2:84–85.

Byzantine emperors, whose agents sometimes marketed the grain of Thrace, had good relations with the Genoese and chose to export their grain to Genoa, even though there might be shortages in Constantinople. The Byzantine economy was disaggregated and disarticulated, the normal exchange patterns no longer functioned, and this may have resulted in the export of the small surplus that could be gathered.

Conclusion

The Byzantine agricultural economy in the thirteenth century and until the middle of the fourteenth was both productive and relatively well integrated with the rest of the economy. At different times in different areas there is good evidence of population expansion, establishment of new villages, land clearance, and meliorations. A part of the peasantry was relatively well-off, much of the peasantry was, in one way or another, for positive or negative reasons, involved in the economy of exchange as well. But the progressive impoverishment of the peasantry, evident already in the first half of the fourteenth century, boded ill, if for no other reason because it necessarily entailed the decline of a certain aggregate demand, limited and periodic, to be sure, but nonetheless real. There was concentration of resources in the hands of large landowners, who must have had considerable surpluses. The landowner of moderate means and the combination of landowner-merchant were promising features of the countryside.

The multiple problems of the mid-fourteenth century, some evident even in the earlier period, brought a decline of production and a restructuring of property in the countryside. The peasantry may have profited to some extent; the provincial lay landowners may also have done well, at least in some areas. The upper levels of the aristocracy lost their fortunes, and eventually there was reconcentration of property in the hands of the larger and more privileged monasteries, at least in Macedonia. The monasteries, however, did not, in this late period, show great versatility or innovative spirit, at least as far as the agrarian economy was concerned. The agrarian economy, under severe strain, had to wait, for its recovery, until the effects of epidemics had been reversed, security had been reestablished, and communications restored: that is, until the firm establishment of the Ottomans in the Balkans.

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Byzantium and the Mediterranean Agrarian Civilization

Pierre Toubert

The history of the agrarian economies and rural societies of the Middle Ages has been acknowledged for some time as one of the most promising fields of comparative history.¹ However, one must admit that in this respect the Mediterranean world appears very backward in relation to the other two great agricultural civilizations of the medieval West: those of the open field regions of northern Europe and of the hedgerow-enclosed fields (*bocage*) of the north Atlantic regions of western Europe. So it is fortunate that this economic history of Byzantium gives the opportunity to a specialist in agrarian questions of the Latin West to outline a comparative approach to the agrarian structures and rural societies of the Greek and Latin areas of the Mediterranean basin.²

Introduction

Certain preliminary remarks are called for, before embarking on the essence of the subject at hand. It should be noted that over the last twenty years or so a whole series of parallel developments has facilitated an improved comparison between the rural reality of the Byzantine world and that of the Latin West.

First, every now and then, a more demanding critical approach has informed the examination of certain types of source material, which lend themselves better to being submitted to comparable methods of treatment and investigation. This is particularly the case of all those documents that, under different designations and diplomatic formulas and for different juridical purposes (polyptychs, rent-rolls, and rent-roll charters in the West; fiscal registers and *praktika* in Byzantium), have a common substance

This chapter was translated by Julian Kassavetis.

¹ See, for example, numerous works by Marc Bloch and, in particular, the less well known texts assembled under the section “Histoire comparée et Europe” in M. Bloch, *Histoire et historiens* (Paris, 1995), 85–144.

² However, there are a number of contributions to a comparative approach to agrarian structures and population structures of the (Greek, Latin, and Muslim) countries of the Mediterranean basin in the Middle Ages in the series of contributions to the *Castrum* colloquia—from *Castrum* 1 (1982) to *Castrum* 7 (in press)—which are published jointly by L’Ecole française de Rome and Casa de Velázquez, Madrid.

in that they list rural dependents, often including an inventory of their holdings, of their family units, and of all the various kinds of services and dues that encumber them. Documents such as these give precious insights into the demography, the condition of the peasantry, the manner of landholding, and the administrative policy of the main economic agents.

A second element that favors a clearer comparative overview is the development—something recent in the Mediterranean world as a whole—of the agrarian archaeology of the Middle Ages in all its forms. “Extensive” archaeology, as it is called, is carried out by the systematic surface exploration of zones, which are themselves delimited on the basis of predetermined historical criteria, which in turn are usually based on surviving written documentation. This type of archaeology has resulted in some remarkable progress being made in Italy, for example, in Catalonia and in Macedonia. Inhabited sites and, in particular, abandoned villages and hamlets, as well as infrastructural installations (mills, irrigation or drainage systems in coastal areas), together with military control installations (watch towers, isolated fortifications, etc.), have all been the subject of stratigraphical archaeology. Everywhere, the finds have opened new perspectives in a number of fields (building techniques, archaeo-technologies, material culture, types and presence of processing industries in the rural environment). On the other hand, the study of the paleoenvironment, thanks to the use of techniques originating in geology—particularly sedimentology—and the study of paleobotany—particularly pollenology, anthracology, and carpology—have only just been applied to the Byzantine world. But this form of study, as is the case with the Latin world, is already a source rich in promise for research into land occupation, movements of population, and the evolution of agrarian landscapes and natural landscapes that have been shaped to a greater or lesser extent by man. What is common to these latter types of research everywhere is their local or regional character. But they supply the historian with a wealth of significant data in the form of case studies. The fact that one is obliged to adopt a critical approach to the scope of the validity of this research helps, in itself, in the elaboration of common or similar types of questions and investigation procedures.

Beyond these particular areas of convergence, it is mainly the widespread attention focused on certain crucial questions which is generating improved conditions for a sound comparative approach. Anxious to delineate more clearly the specificities of medieval agrarian economies, specialists are increasingly concerned with, for example, the role played by towns—large cities certainly, but also, and perhaps preponderantly, minor urban centers—in the strengthening and vitalization of the agrarian economy of the hinterland.³ By the same token, the related problems of monetary circulation and the function of money in rural environments, the redefinition of the very concepts of rural trade,⁴ the establishment of agricultural prices, and the costs and wages (in

³ See, for example, H. K. Schulze, ed., *Städtisches Um- und Hinterland in vorindustrieller Zeit* (Cologne-Vienna, 1985).

⁴ See, in the last instance, the extremely useful recapitulation by A. Verhulst, “Marchés, marchands et commerce au haut Moyen Âge dans l'historiographie récente,” in *Mercati e mercanti nell'alto medioevo: L'area euroasiatica e l'area mediterranea* (Spoleto, 1993), 23–50.

particular of agricultural laborers) in the precapitalist economy have for too long been dominated by an implicit and anachronistic reference to the categories formulated by modern-day economic thinking. The advantages presented by an enhanced assimilation of the achievements of economic anthropology are being appreciated everywhere. These achievements appear to be of particular relevance to two privileged fields: that of the structure and principles of the regulation of exchange (K. Polanyi et al.) and that of the concept of the tributary state (S. Amin, P. Chalmers, P. Guichard, et al.).⁵ It is in the context of this new climate of convergence of the objectives, methods, and problems of historical study that the following discussion must be seen.

Genesis of a Common Agrarian Civilization in the Mediterranean

The study of the parts of this volume devoted to agrarian economy and rural life in the Byzantine world leaves one with a very strong first impression: the Byzantine world belongs to a Mediterranean "agrarian civilization" whose structural elements came into being under fairly similar conditions in both East and West.⁶ Comments on this subject that are useful for the student of the West and, conversely, ideas that might throw additional light on the questions raised for the Byzantine world spring, so to speak, from each page. I mention here the most striking characteristics regarding the constants of agricultural production, to use the phrase coined by Jacques Lefort.

One can ascertain, first of all, that Byzantium did not experience an "agricultural revolution" in the Middle Ages, in the true sense of the term, any more than did the Latin West.⁷ But, no more than in the case of the West, should one be drawn to the conclusion that the techniques and economic conditions of agricultural production suffered a prolonged period of stagnation. One can go further and draw up a brief inventory of the areas where parallel series of sectoral improvements appear, in the East and in the West, in the same general context of the rational development of a Mediterranean agrosystem, on which, in 1971, John Teall had already touched, in terms of "growing into the environment."⁸

⁵ See below, note 28.

⁶ Despite the fact that they make constant use of the term, neither Bloch nor his successors have ever given a definition to the concept of "agrarian civilization." For the sake of clarity in what follows, I should like to specify that this term implies that three types of phenomenon have been taken into account: (1) systems of cultivation in the broadest sense, i.e., agricultural methods, types of crops and technology, types of connection between agriculture and animal husbandry, etc.; (2) the organization of fields, their layout in parcels and their rational organization within a total cultivated area; and (3) the relationships between an agrosystem such as this and a particular kind of settlement, both as the focal point of a rural area and as the context for rural social intercourse. In my view it is the coordination of these three categories of information that gives "agrarian civilization," in the true sense, its defining features.

⁷ For a proper appreciation of just how "agrarian revolution" in precapitalist times must be understood, see A. Veerhulst, "Agrarian Revolutions: Myth or Reality?" *Sartoriana* 2 (1989): 71–95.

⁸ J. L. Teall, "The Byzantine Agricultural Tradition," *DOP* 25 (1971): 33–59; see the quotation (and reference to the work of R. J. Braidwood on the concept of "growing into the environment") in *ibid.*, 36. In any case, one can but subscribe to the views developed by the author on the agricultural conquest in the Mediterranean world, which he defines in terms of "prudent aggression of natural surroundings."

The principal elements of such a growth can be summed up in the development (completed everywhere by the 12th to 13th century) of agricultural joint plots and their usage, according to a common typological range: (1) *huerta* and orchard tracts based on intensive polyculture, associated or not with fruit-bearing trees, close to either rural communities or urban centers of consumption, and based on the triple accumulation of manual labor, irrigation resources, and the limited availability of manure characteristic of a production system that is all but unaware of the stabling of larger animals; (2) specialized fields having a high relative yield (vineyards, hemp fields, fields devoted to forage crops, etc.); and (3) lands of dry cereal cultivation linked to, or bordering on, extensive tree plantations such as olive groves.

A consistently favorable demographic trend from the eighth to the fourteenth century (see below) did not result only in a simple quantitative increase of arable area and of the overall volume of production. It also led, everywhere, to three consequences that were decisive in qualitative terms: (1) an improvement in yields linked, admittedly, to the expansion of area under cultivation, but connected also with the development of agricultural practices that themselves arose from the greater availability of labor and from various technological improvements; (2) a more pronounced specialization and differentiation of the agricultural land that can sometimes be seen in the setting up of typical parcel layouts; and (3) a more logical organization of the lands of different usage making up a given agricultural area, whether they belonged to a rural commune, or to an estate.

Without repeating here each point of the analysis of this developmental process of a common Mediterranean agrosystem, one can point out that, as regards the fields with high productivity, the improvement in irrigation techniques, as witnessed by numerous archaeological investigations, ensured the expansion of irrigated areas allocated to vegetable production.⁹ With regard to cereal crops, in appearance less dynamic,¹⁰ it has now also been established that tangible progress contributed to an increase in available provisions. This increase was arrived at, in a manner both empirical and subtle, by making better use of what the environment had to offer. The Mediterranean world, in Byzantium as in the western Mediterranean, was unable, owing to the identical con-

⁹ In all the countries of the Mediterranean basin, this extension of the *huerta* is confirmed from the 11th–12th centuries on, on the one hand, in the fields that were closest to the rural settlements and, on the other hand, in the irrigated vegetable- and fruit-growing zones most closely linked to the urban centers of consumption, from Valencia to Constantinople. The archaeological identification of the medieval “hydraulic area” and their historical interpretation represent one of the strong points of current research in Spain. Among the best recent works (with detailed bibliographies), one should mention M. Barceló et al., *Arqueología medieval en las afueras del “medievalismo”* (Barcelona, 1988); M. Barceló, “El diseño de espacios irrigados en al-Andalus: Un enunciado de principios generales,” in *El agua en zonas áridas: Arqueología e historia* (Almería, 1989), 1: xiii–xlvi, as well as H. Kirchner and C. Navarro, “Objetivos, métodos y práctica de la arqueología hidráulica,” *Archeologia medievale* 20 (1993): 121–51, repr. in *Arqueología y territorio medieval* (Jaén) 1 (1994): 159–82.

¹⁰ The apparent—but deceptive—character of this perceived sluggishness in medieval cereal production arises mainly from the fact that the treatises on the agronomy of the Byzantine, Arab, and Latin worlds focus their attention on market crops and on the intensive methods from which their yields could benefit.

straints imposed by these surroundings, to develop, as was the case in northwestern Europe, new cereal production systems based on rotation practices more productive than the biannual wheat crop/fallow rotation inherited from ancient agronomy. However, significant advances in productivity, discernible everywhere, were achieved through the application of various technical improvements: for example, the development, on fallow land, of catch crops of leguminous plants, which both fertilize and are of a high nutritional value; the sowing of better-selected and more robust winter cereals, denser sowing, the improvement of plowing teams and of animal pulling power thanks to the use of leguminous fodder as feed.

It is striking to note that these converging evaluations of medieval Mediterranean cereal production as neither revolutionary nor stagnating lead to very comparable conclusions regarding the Latin West and the Byzantine East on two points that are crucial because they are indicative. First on the question of wheat yields, a subject on which western historiography used to be overly pessimistic,¹¹ the figures considered today to be the most reliable are identical to those recorded for good cereal fields in the Byzantine world and indicate yields of at least 4–5:1. On the related and equally revealing question of the “minimum essential” cultivated area, necessary to sustain a standard peasant family (i.e., a nuclear family of four to six people), the figures put forward in both cases (between 5 and 8 ha) point to equivalent yield factors, according to a uniformity of actual cases, which is confirmed by an identical distribution of the land parcels that make up each holding, according to the various types of agricultural land enumerated above.

In other more specific domains, such as the technologies for the processing of agricultural produce, the fragmentary nature of surviving written documentation, combined with the less advanced state of agrarian archaeological study of the Byzantine world, explains why parallel developments, suspected to have been under way in the high Middle Ages, can only be confirmed in the late medieval period, when the Byzantine sources become more abundant. This is the case of, among others, the water mill, in whose propagation in the high Middle Ages the large landowners seem to have been the principal economic agents,¹² in both the East and the West. But here again, and contrary to the theses once made known in the famous article on this subject by Marc

¹¹ The opinions on the question of cereal yields, which were prevalent in the 1960s, are summed up in G. Duby, *L'économie rurale et la vie des campagnes dans l'Occident médiéval* (Paris, 1962), 1:85–87 and 184–91. Duby reached the conclusion that “the ratio of grain harvested to grain sown does not appear to have been much higher than 2:1 in the Frankish period” (p. 189). For successive, but not very conclusive, discussions, see M. Montanari, “Techniche e rapporti di produzione: Le rese agricole dal IX al XV secolo,” in *Le campagne italiane prima e dopo il mille*, ed. B. Andreolli and M. Montanari (Bologna, n.d. [1986]), with a useful bibliography covering 1960 to 1985. But, in the spirit of the minimalist tradition, Montanari's estimates remain excessively low—around 4:1 in northern Italy at the end of the Middle Ages. A yield of 4:1 is also considered “normal” by R. Delatouche, “Regards sur l'agriculture aux temps carolingiens,” *JSav* (April–June 1977): 73–100, cited in *Le campagne italiane*, n. 19.

¹² See, most recently, together with a complete list of previous bibliography, E. Champion, *Moulins et meuniers carolingiens* (Paris, 1996).

Bloch,¹³ recent well-founded work confirms the widespread presence of the water mill throughout the western part of the Romania¹⁴ as early as late antiquity. This newly acquired knowledge relegates to the realm of historical myth the hitherto accepted ideas of a technological divide between East and West and of an independent and relatively recent development of the water mill in the West, as a result of a so-called “hydraulic revolution of the eleventh century.” Equally indicative of the parallel nature of developments in this field is that the spread of the water mill from the twelfth to the thirteenth century on, in both Byzantium and the Mediterranean West, reflects more and more clearly the vigor of agrarian communities and their ability to build and maintain technical installations—be it mills or irrigated areas—for communal use, if not for collective use in the real sense.

One could easily extend this list of the resemblances that have been observed at the level of the constants of agricultural production. But this is not where the main interest lies. What is of greater interest is that, in both the East and the Mediterranean West, the progressive establishment, between the eighth to ninth century and the twelfth to thirteenth century, of an agrosystem based on a clear differentiation between agricultural lands of varied cultivation was matched by a corresponding development or strengthening of the structures of rural habitation, grouped into villages or into hamlets created by the landlord. This concentration of the peasantry was the only way to ensure the rational management of an agrarian area that was being so knowledgeably diversified. We know how, in the West, this trend found its most perfected, often predominant, form in the *castrum*: a grouped and fortified hill village. It would be pointless to try to identify in Byzantium a movement corresponding to the *incastellamento* of rural communities that, in the West, went hand in hand with the fragmentation of power and its strong territorialization, and with the establishment of those original forms of political control, both economic and social, that, to be brief, can be termed feudal. Nonetheless, in a totally different institutional and social context, the Byzantine world also rested on the same pedestal of agrarian civilization formed by the structural association of a clustered settlement with well-defined village lands—the Byzantine *chorion* or Latin *tenimentum*—the lands divided into tracts of different usage that correspond, in both cases, to a common range of types. The unity of this agrarian civilization is best expressed, in the end, by the structural similarities that characterize the typical peasant holding: the peasant holder resides in the village and simultaneously exploits a number of scattered plots devoted to different land uses; this very dispersion ensures the productive equilibrium of a holding whose purpose is to provide the subsistence of a familial unit of farmers engaged in direct exploitation of their holding.

Finally, the last major characteristic of this agrosystem lies in the disjunction between the agricultural and pastoral sectors, which can be seen everywhere to varying degrees.

¹³ M. Bloch, “Avènement et conquêtes du moulin à eau,” in *Annales d'histoire économique et sociale* 7 (1935): 538–63, repr. in idem, *Mélanges historiques* (Paris, 1963), 2:800–821.

¹⁴ See the numerous works of Örjan Wikander, esp. “Vattenmölör och möllare i det romerska riket” (doctoral thesis, Lund, 1980), and his more recent update, “Archaeological Evidence for Early Water-Mills, An Interim Report,” *History of Technology* 10 (1985): 151–79.

It is shown first at the level of agrarian realities themselves. The ever present juxtaposition of an agricultural “in-field” with a pastoral “out-field” is emphasized by the use, in the Mediterranean West and in Byzantium, of equivalent expressions. For example, the *tenimentum de intus* and *tenimentum de foris* of Italian charters correspond quite well to the distinction made in the Byzantine *Fiscal Treatise* between *exothyra* or *exochoria* on the one hand and *esothyria* or *enthyria perivolia* on the other. Everywhere, the autonomous character of the advances that left their stamp on the pastoral sector, in the shape of the progressive organization of the movement of flocks from summer pastures in the mountains to winter pastures in the lowlands and coastal regions, were, at the economic level, the result of a very low level of integration of the pastoral sector into agricultural life. Mentioned occasionally in Byzantium from the end of the eleventh century on, for example in the *typikon* of Gregory Pakourianos, these practices, which were still only very experimental until the thirteenth century, run parallel with the creation of coherent village landholdings in the intermediary zone between permanent settlements and agricultural lands. But these practices did not really establish themselves in the West until the twelfth century or even later. They were then strengthened, in both East and West, following the well-considered economic decisions taken by the landed aristocracy (monastic or secular), and as a result of an increase in demand, mainly urban, for products and raw materials of pastoral origin (wool, cheeses). Thus everywhere such choices predated the major demographic crises of the decades following 1340. Far from constituting a response to the problem of a diminishing agricultural labor force, these choices are indicative of an older concern of the great landowners: to optimize their profits from the vast tracts of land unsuitable for more intensive agricultural reclamation. Pastoral nomadism and the development of seasonal grazing made the shepherds’ world a closed society, with its primitive temporary settlements, migration routes, and unwritten laws. At this time, pastoral banditry and, in particular, cattle rustling constituted the common characteristic of a Mediterranean rural society marked everywhere by a great divide between shepherds and peasants.

The Synchronicity of Events

A first convergence is obvious and comes as no surprise: economic history and, in particular, the agrarian history of the Byzantine world, is set against the background of a fluctuating curve of demographic movements quite identical to those that characterize the West of this period. However, the studies on the agrarian economy in the present volume allow one to go further than this commonplace on several important points. It has been known for some time that the overall curve shows a continuous increase, without demographic catastrophes, between the two great epidemics that, in a sense, frame the Middle Ages: the “Justinianic” plague of the sixth century and the Black Death of the end of the 1340s. These two major events signal, in East and West, the two great reversals of the long-term demographic conjuncture.¹⁵ Suffice it to note,

¹⁵ The fundamental work on the “Justinianic” plague is still J.-N. Biraben and J. Le Goff, “La peste dans le haut Moyen Age,” *Annales ESC* 6 (1969): 1484–1508. I discount the works aimed at limiting

on this subject, that we now have precise indicators for the important phenomenon of the recurrence of the plague, in both East and West, from 541–542 to the first half of the eighth century and from 1347–48 to the 1420s, affecting both areas in what would appear to be a very similar fashion.¹⁶ The end of these recurrences, which has been confirmed from the 740s on, together with the sustained growth in population whose cumulative effects were felt for the next six centuries, constitute not an explanation for, but a major contributing factor to, the agrarian growth that is everywhere apparent between the middle of the eighth century and the middle of the fourteenth.

However, in the East as in the West, this major trend was not exempt from occasional crises. Shortages, famines, even local or regional incidences of “mortalities,” had their effect in the short term, without ever reversing the underlying tendency. It is worth noting that, of themselves, these occasional crises display interesting similarities. Thus the famine witnessed in Byzantium in the winter of 927–928, which brought about the successive imperial legislation of Romanos Lekapenos and Constantine VII, is altogether reminiscent, for the Western medievalist, of the great famines that affected the Frankish Empire in 792–793 and 805–806, with the ensuing legislation of Charlemagne’s Capitularies.¹⁷ In both these cases, the public authority appears to have been concerned with establishing corrective mechanisms through state intervention: in the West, by setting the price of provisions and attempting to regulate the market by the establishment of public granaries; in the East, by controlling peasant indebtedness and upheavals in land prices. The common aim of Charlemagne and the Byzantine emperors appears to have been to protect those strata of free peasantry—*liberi pauperes homines* in the Frankish Capitularies, the *penetes* and *ptochoi* of the “social” novels of the Byzantine emperors—that were hardest hit by the crisis, against the same threats from the landed aristocracy: the appropriation of land and the exploitation of the critical increase in agricultural prices for excessive profit. These crises, which are relatively well documented as regards their results, all have a common pattern of causality that, in effect, always starts as a grain crisis brought on mainly by climatic conditions. This leads to a drastic reduction in the volume of available stocks, the breakdown of normal market mechanisms, soaring grain prices orchestrated by the great landowners, and the ensuing popular unrest. As with all comparisons, this one has its limits. In the long series of subsistence crises witnessed between the ninth and thirteenth centuries,¹⁸ any

the scope (or even denying the existence) of the epidemic of 541 and succeeding years. This essay had already been completed when Michael McCormick kindly brought to my attention the important dissertation of L. I. Conrad, “The Plague in the Medieval Near East” (Ph.D., Princeton University, 1981). I am grateful to Professor McCormick for this information.

¹⁶ J.-N. Biraben, *Les hommes et la peste en France et dans les pays européens et méditerranéens*, 2 vols. (Paris, 1975), is an important work of collection and interpretation of information.

¹⁷ See A. Verhulst, *Karolingische Agrarpolitik: Das Capitulare de villis und die Hungersnöte von 792/93 und 805/06* (Ghent, 1965).

¹⁸ A first inventory, with an interesting analysis, can be found in F. Curschmann, *Hungersnöte im Mittelalter* (Leipzig, 1900). A complete list of the crises of meteorological origin, based on an almost exhaustive reading of narrative sources, can be found in P. Alexandre, *Le climat en Europe au Moyen Age* (Paris, 1987).

parallels drawn between East and West are only valid for the ninth to tenth centuries, at which time the state, in the West, still retained some capacity for intervention. Even at this time, the state's role seems to have been directed toward the control of the distribution and price of provisions, while in the East legislation was aimed, primarily but not exclusively, at protecting the interests of smallholders and the tributary peasantry.¹⁹ With the return of a degree of state interventionism in economic matters in the West, as for example in the Italian communes of the twelfth to thirteenth centuries, the state always directed its actions toward price regulation mechanisms in times of shortage and not, as in Byzantium, toward the regulation of the land market.

Quite apart from this improved understanding of the role played by cyclical crises in a context of long-term growth, the benefits of a comparative approach are most fully revealed with regard to the important question of the economic takeoff of the high Middle Ages. The view of Byzantium presented here, set against the most recent advances in western historiography,²⁰ brings to light a convergence of views that is all the more remarkable for having evolved without any collaboration. It is, however, clear that, in both the West and the East, the idea of an "economic Renaissance of the eleventh to twelfth centuries," that was prevalent for a long time, has been abandoned in favor of a much earlier date for the onset of economic expansion. A closer examination of written sources, made distinctly easier in the case of the West by recent archaeological contributions, leaves no doubt that agrarian redevelopment in all countries of the Mediterranean basin—both Greek and Latin—got under way as early as the eighth to ninth century. At certain exceptionally well documented sites, in Italy and in the south of France, the information provided by polynology and anthracology facilitates the task of defining this revival and measuring its impact on the environment, which reveals human encroachment as early as the ninth century, perhaps even the latter half of the eighth. While the social context of this first agrarian reconquest has yet to be defined—and, in particular, the respective roles of the great estates and of the small peasant communities of settlers clearing land—its reality is no longer in question, either in the case of the West or in that of the East. Also the idea of a gradual process of redevelopment—modest as yet in the ninth century, more pronounced from the middle of the tenth—is gaining ground over that of an abrupt takeoff. The acceleration of this process in the eleventh and twelfth centuries can only be grasped in the light of those same cumulative effects on expansion exercised by the population increase, which was of a sustained nature from the middle of the eighth century on.

¹⁹ In fact, it also happened that the Byzantine emperor, like Charlemagne, intervened in order to regulate the price of cereals in the capital in times of shortage by selling wheat from the imperial warehouses, as happened, for example, in the 9th century, under Basil I; cf. *Hommes et richesses dans l'Empire byzantin*, 2 vols. (Paris, 1989–91), 2:360–61. For other attempts along these lines, see *ibid.*, 361–62. I would like to thank Jacques Lefort for this information. See also A. E. Laiou, "Exchange and Trade, Seventh–Twelfth Centuries," *EHB* 705.

²⁰ For the state of the question (and bibliography), see P. Toubert, "La part du grand domaine dans le décollage économique de l'Occident (VIIIe–Xe siècles)," in *La croissance agricole du haut Moyen Âge*, ed. Ch. Higounet (Auch, 1990), 53–86.

Finally, an examination of the crises of the later centuries of the Middle Ages, and of their effect on the peopling and development of the countryside, leads one, here again, to emphasize the similarities, but also to highlight their limits. For both Byzantium and the West, the thirteenth century conveys a clear impression of a "saturated world" at the breaking point of the rural ecosystem that had been in place since the ninth to tenth century. In the case of Byzantium, this impression is borne out by several conclusions drawn from a documentation that is henceforth more plentiful in certain regions, first and foremost, Macedonia. As in the Latin West, although doubtless less clearly visible in the Byzantine sources, the social consequences of this saturation of a rural environment at the limits of its technical capacity for expansion, are the impoverishment of the poorest, the proliferation of exiguous peasant holdings deficient in proper farming equipment, and the disturbance of the land market, to the benefit of the great landowners. In both East and West also, one can discern a new concern for the protection of the environment and for the conservation of what was left of the forest. Similarly, the increasingly disappointing nature of the most recent land clearing operations accounts in part for both the large scale and the premature nature of failures and of land abandonment. This abandonment of land has been detected in both East and West in the first half of the fourteenth century, even as early as the thirteenth century, that is, before the onset of the great epidemics. We have here synchronicities that deserve attention and force us to review our argumentation regarding the abandonment of the countryside in the later Middle Ages.²¹

As for the evacuations following the Black Death of 1348 and its recurrences, the main types of questions are remarkably similar. Nearly all the aspects of this phenomenon recorded in the case of the West also seem to be detectable in the case studies provided by the Greek documentation from the period 1340–1420: total or partial evacuations; final or temporary evacuations; the abandonment of certain marginal lands with the survival of the place of habitation, accompanied by the restructuring of the agrarian community around a reduced number of holdings or, conversely, the complete desertification of the village which may go together with the assimilation of its best lands within the boundaries of a neighboring village that survives. In the most favorable cases, from the historian's point of view, those revealed by the documentation of Mount Athos, the combined resources of the texts and the examination of the sites allow a precise approach to be made. But everywhere today, the decidedly complex nature of the local situations is turning the attention of historians away from the simple objectives that were those of the first German *Wüstungsforschung*. In particular, one hardly believes anymore in the possibility of defining a region by establishing an index of the characteristics of the evacuations that affected it. Based on the types and rates of evacuations, more than on their imputed quantitative incidence, comparative research does not, for all that, give any the less an impression of considerable similarity in the amplitude and long-term effects of the agrarian flight of the fourteenth and fifteenth centuries.

²¹ See P. Toubert, "Problèmes actuels de la Wüstungsforschung," *Francia* 5 (1977): 672–85.

Byzantine Specificities

This summary list of the areas useful in a comparison between the Greek and Latin rural situation of the Middle Ages leaves wide open the field of Byzantine particularities. The most striking of these arise from the enduring nature of the Byzantine state and from the continuity of its interventions at the level of the rural economy and society. One may note, in this connection, that through a sort of rebound effect or, one might say, through a process of Byzantinization, western historiography nowadays tends to attach more importance to the tenacity of the influence of public fiscal regulations on the agrarian economy of the high Middle Ages; indeed certain scholars overestimate this influence to an absurd degree.²² It must be admitted that these “fiscalist” concepts do in fact contribute some useful corrections to our understanding of the “barbaric” sixth and seventh centuries. Conversely they cease to be of relevance from the eighth to ninth century on, when the collapse of public structures and the expansion of private lordship led to the fragmentation of power and the establishment, in the tenth to eleventh century, of the rural *seigneurie* as the basis for the organization and control of all aspects of life in the countryside. It would, therefore, be idle to insist on the original traits conferred in so many ways on the Byzantine rural community, by the presence of a public system of taxation, whether direct or assigned to private beneficiaries. The persistence of public fiscality affected the statutory classification of the various categories of dependents and holdings and the very conditions governing the mobility of land and men. Compared to the Latin West, it is appropriate to note the relatively high rate of monetization of the rural economy, which is in part attributable to the paying of tax and its effect on the vigor of the local economy. This was so in a period when, by a sort of inverse symmetry, the erosion and fragility of the mechanisms of the so-called feudal coinage obliged the landlords, in the West, to favor rents in kind and sharecropping contracts.

Another element that reveals the monetary vigor peculiar to the Byzantine agrarian economy was the importance of the agricultural workforce, far greater than in the West at any rate until the thirteenth century, and of salaried labor in the rural economy generally. The existence of this salaried labor is attested by a specific terminology that has no counterpart in the West, and that designated all the kinds of paid rural labor, whether that of peasants whose holding was insufficient to provide them with a livelihood and who thus belonged to the lowest level of poor and ill-paid laborers, or, on the contrary, that of workers assigned to specialized tasks (millers, shepherds, mule-drivers, etc.) as part of the direct exploitation of the domanial reserve. Their appearance in the documentation points to a real absorption of this workforce into the good management of the estates, in the context of a rural economy that, in the case of the eleventh century, Paul Lemerle did not hesitate to qualify as “essentially monetary.”²³

²² For an excellent critical analysis of the aberrations of the “fiscalist” theses, see Ch. Wickham, “La chute de Rome n’aura pas lieu,” *Le Moyen Age* 99 (1993): 107–26.

²³ P. Lemerle, *Cinq études sur le XI^e siècle byzantin* (Paris, 1977). The reference to an economy that was “essentiellement monétaire” may be found on p. 189 (commentary on the *typikon* of Gregory

Here again, this is in clear contrast with the *ministeriales* of the western estates who belonged to, or came from, the servile class, even if this latter category is not entirely absent from contemporary Byzantine documentation.²⁴

The enduring capacity of the Byzantine state to intervene, in a way that was both regulatory and practical, in the agrarian economy is all the more striking in that several of the fields of intervention were precisely those that, in the West, were most hostage to the arbitrary behavior of the great private landowners. As an example one may mention the Byzantine state's power to administer or reassign untenanted properties and the role of clasmatic lands, different from that of the *absae* or *vacantes* lands of the great western estates of the ninth and tenth centuries.²⁵

More generally, the tributary nature of the Byzantine state meant that its officials measured the surface of fields and orchards, indeed of space; described holdings or listed their tenants; and defined and periodically adjusted the basis of the land tax. In short, the employee of the fisc became a familiar figure in rural society. The use of computers to process the quantitative data supplied by the fiscal registers or by the accompanying *praktika* has enabled us to grasp the principles and formal rules followed by the public officials. For the student of the medieval West, there is a twofold lesson to be drawn from the range of research that, in this field, has enriched Byzantine studies. First, the absence of this type of document, or even of any mention of it, in the West, from the eighth to ninth century on, and the private nature of those western documents whose content is most comparable—polyptychs and rent-rolls—is in itself indicative of the disappearance of the fiscal yoke from the Carolingian period on.²⁶ From then, and until the thirteenth century, the demarcation of cultivated land and the measurement of parcels of land became, in the West, the business of notaries or scribes acting exclusively on behalf of private individuals. But a second conclusion is of greater interest: the rebirth of the state and, thereby, of its tributary domination, observable in Europe since the thirteenth century, had the effect of bringing about the establishment of detailed fiscal registers, first of all in the large Italian communes. The oldest surviving fiscal cadasters, such as the great cadaster of Orvieto of 1292, have been analyzed with the help of the computer. The analysis shows clearly that they, like the equivalent Byzantine documents, followed principles of bureaucratic formalization that, in themselves, were responses to the needs of the state and to social conditions.²⁷

Pakourianos). The author also notes that the *typikon* presents us with “une image valable pour un très grand nombre de cas semblables” (p. 181).

²⁴ As, for example, the will of Eustathios Boilas, commented on in Lemerle, *Cinq études*, 15–63. For the western equivalents of these “poches d'esclavage rural” in the world of estate *ministeriales*, one can find all useful references in A. Verhulst, “The Decline of Slavery and the Economic Expansion of the Early Middle Ages,” *Past and Present* 133 (1991): 195–203.

²⁵ See J.-P. Devroey, “*Mansi absi*: Indices de crise ou de croissance de l'économie rurale du haut Moyen Age?” *Le Moyen Age* 82 (1976): 421–51.

²⁶ In addition to the study by Wickham, quoted above, note 22, see also J.-P. Devroey, “Polyptyques et fiscalité à l'époque carolingienne: Une nouvelle approche,” *RBPH* (1985): 783–94.

²⁷ On the subject of the cadaster of Orvieto, which names more than 6,300 taxpayers and, it should be borne in mind, lists more than 18,500 parcels, see E. Carpentier, *Orvieto et son contado à la fin du*

A more thorough comparison of the measuring and registering practices of the Byzantine fisc with the registration practices of the *extimatores* of thirteenth- to fifteenth-century Italian communes would be most enlightening. This is a subject for the future.

It is also well known that the forms of intervention of the tributary state are not limited to the levying of taxes. It is apparent that the Byzantine state played a motive role in numerous areas of the life of the countryside. Without being exhaustive, one could mention the weighty role of the state in the definition of the juridical status of the various categories of tenants, in the mobility of rural populations, and in important transfers of property. The state also established population policies to meet local or regional military needs and influenced the organization of regional or interregional exchange structures through the preferential treatment of urban demand. In all these fields, recent historiography shows clearly how the particularities of the tributary state, as defined by historical anthropologists, make a comparison with Islam more pertinent than a reference to the feudal West.²⁸

Finally, I would like to raise a question, central to Byzantine rural history, that is very revealing, from the western point of view, of its particularities: the variable or permanent coexistence of two apparently distinct structures, the village and the estate. As a form of settlement and of the organization of cultivated space, and also as a social unit, the village is certainly the primary agrarian structure. However unequal and socially differentiated it may be internally, the village is a community. It distills the forms peculiar to peasant society, rich perhaps in internal conflict but also in its ability to soothe these antagonisms and to create local custom. Until the eleventh century the state, in contrast with the West, was committed to the protection of the village. From the eleventh century on, however, this structure, always vulnerable, became more clearly prey to the estates and to the greed of the landed aristocracy. The latter, however, is seen to have been quite different from the contemporaneous aristocracies of the West, clearly because of its links with the state. But this was also because of the particular nature of its family networks, its mobility and firm establishment within the empire, and its ability, at least until the period of the Palaiologoi, to absorb new men. The great estates paralleled these developments and were directly affected by them. Until the eleventh century, the structure of the estate is in fact quite reminiscent of that of the western *curtis* or *villa*; it engendered similar forms of settlement: isolated farms and scattered hamlets with dependent settlers. It was run along similar lines of economic management and social structure: the division into lots of the areas reclaimed by agriculture, the strong presence of the estates' steward whose image, as

XIIIe siècle: Ville et campagne dans le cadastre de 1292 (Paris, 1986). Also some very useful contributions in the work of J.-L. Biget, J.-C. Hervé, and Y. Thébert, eds., *Les cadastres anciens des villes et leur traitement informatique* (Rome, 1989).

²⁸ Some of the most stimulating works on this subject are S. Amin, *Sobre el desarrollo desigual de las formaciones sociales* (Barcelona, 1974); P. Chalmeta, "Al-Andalus: Société 'féodale'?" in *Le cuisinier et le philosophe: Hommage à Maxime Rodinson* (Paris, 1982), 179–90; and above all the exceptional text by P. Guichard, *Les Musulmans de Valence et la reconquête, XIe–XIIIe siècles* (Damascus, 1990–1991, esp. 2:247ff.

portrayed by the *epitropos* of the *Geoponika*, mirrors on all points that of the *villicus* of the great Frankish estates, described in Charlemagne's *Capitulaire de villis*. The occasional presence of elements of fortification designed to protect—really or symbolically—the estate and the preferential investment in certain activities (e.g., mills, vineyards, and olive orchards) are all elements of similarity.

Thus there is no fundamental difference between the structure of the great estate of Byzantium and that of a type of large estate that is easy to find in the ninth to tenth centuries in the Mediterranean Latin West,²⁹ even if this statement cannot be extended to include the great Frankish estates in general. But from the eleventh century on, in conditions that there is no reason to repeat here, the system underwent a series of profound transformations. As a result, what had been a vigorous and quite clearly defined economic unit became a more complex management structure by virtue of the absorption, into the sphere of economic control of the estates, of rural communities henceforth submitted to the hybrid demands of subordination to the state and the domanial context. This development reveals new distinguishing features. The establishment, from the twelfth century on, of a real culture of estate management and accounting afforded the Byzantine landlord a clearer picture of his interests. The documentation clearly reveals a concern for reinvestment of part of the land revenues in the agricultural sector, a form of economic behavior unknown at that time in the feudal West. There can be no doubt that the smallholding allocated mainly (but not exclusively) to a nuclear peasant family continued to be the rule. However, the forms of integration of the rural communities into estate control, known from case studies permitted by the documentation, for example, the studies on the villages of Mamitzon and Radolibos, point to situations entirely irreconcilable with the patterns of western agrarian history of the same period. For example, the well-known case study of the village of Mamitzon in the 1320s presents the picture of a structure that combines a considerable domanial reserve given over to grain cultivated through the tenants' corvée labor, together with revenues of fiscal origin levied on the peasants and their plots. It would be fruitless to search for a system of economic organization so complex, and based on such a level of institutional synthesis, in the western seigneurial structure.

These final observations point to a conclusion. For the student of western medieval Europe who is fond of comparative history, the possibilities raised by Byzantine agrarian history are rich in content and full of potential, but on one condition. We must always be careful, if we are to make valid comments on the similarities and differences, to examine the rural realities of the East from two different perspectives. The first allows one to describe the conditions (be they environmental, technical, demographic, and also social, in part) that created a sophisticated agrosystem and one that, in many respects, was developed at the same time and at the same pace as in the western Mediterranean. The second should, on the other hand, point up the factors proper to By-

²⁹ See P. Toubert, "L'Italie rurale aux VIII^e–IX^e siècles: Essai de typologie domaniale," in *I problemi comuni dell'Europa nel secolo VIII* (Spoleto, 1973), 95–132 and 187–206. Here I refer to the great estates belonging to Type I of the typology mentioned.

zantium: political (in the broad sense), institutional, social, and cultural. These two perspectives, as I have attempted to demonstrate briefly, should be complementary. Only a proper awareness of this complementarity allows a healthy comparative approach that would follow the principles and wishes once expressed by Marc Bloch in a fine programmatic essay that has lost nothing of its relevance.³⁰

³⁰ M. Bloch, "Pour une histoire comparée des sociétés européennes," *Revue de synthèse historique* 46 (1928): 15–50, repr. in idem, *Histoire et historiens*, 94–123.

The Urban Economy, Seventh–Twelfth Centuries

Gilbert Dagron

Introduction: Cities and Their Economy

Toward a Definition of the City and of the Urban Economy

To counter the excessive confidence of historians who tend to ascribe universal applicability to the urban phenomenon, a number of sociologists have offered a radical critique not only of any uniform definition of “city,” but also of any typology of the city. By these lights, the notion of the “city” is a pure abstraction, and models of cities constitute little more than window dressing.¹ It is true that the characteristics ascribed to cities by historians are often more evocative than they are coherent: for example, definitions of cities as fortified sites and market settlements (the Byzantine *kastron* and/or *emporion*); centers of production versus consumer or “parasitic” cities; “patrician” and “plebeian” cities; “bourgeois” towns and “rural towns” (the *Akerbürgerstädte* put forth by Max Weber, whose cautions on the limits of the contrast between urban and rural are apposite here). Without venturing into excessively theoretical terrain, it is useful to recognize that the classical origins of our culture have encouraged us to view the city as a microcosm in which social institutions (juridical, economic, political, and cultural) are concentrated, and to identify it with the “*polis*”—a juridical entity that represents the antithesis of the countryside (over which it holds sway) and that functions as both intermediary for and counterbalance to the state.² To the schematics of antiquity, the Middle Ages added its own, envisioning the town as a pocket of resistance against a land-based feudal system, an environment in which ties of dependence dissolve (*Stadtluft macht frei*; the city is a “savonnette à vilains”; the city, in short, gives freedom) and in which a specific kind of political relations can develop. Max Weber put particular emphasis on how medieval towns spawned new ties of solidarity, treated as suspect by

This chapter was translated by Charles Dibble.

¹ See in particular P. Abrams, “Towns and Economic Growth: Some Theories and Problems,” in *Towns and Society: Essays in Economic History and Historical Sociology*, ed. P. Abrams and E. A. Wrigley (Cambridge, 1978), 9–33.

² Such are the issues discussed in *La Ville*, Recueils de la Société Jean Bodin 6–8 (Brussels, 1954–57).

virtue of their being outside the norm and based on the *conjunctio*. These solidarities could be confraternal and corporative (representing a mechanism of social leveling), or aristocratic (representing the de facto power that leading citizens could gain). Finally, and above all, the medieval and the modern city were considered the locus in which an economy could ultimately cast aside religious taboos and state control to establish its own rationality, deriving from itself a regulatory apparatus over which the state need no longer intervene.³

As doubt proverbially follows certainty, so, with respect to the medieval East, can we formulate a modest set of facts. With the exception of a few large centers, there was little pronounced distinction between the “urban” domain and a rural world that was doubtless home to between 90 and 95% of the population and that dominated the region’s economy and fiscal system. Byzantine towns are perhaps to lesser extent the successors of ancient cities than they are of fifth- and sixth-century large rural agglomerations, which had been fortified relatively early in their history in order to resist invaders, and in which basic cottage industries developed. Their population consisted mostly of peasants, who farmed the adjoining land. Thessalonike, the empire’s second-largest city, lost most of its population at harvest time. The phenomenon was even more pronounced in small towns, in which 1,000–2,000 inhabitants lived essentially off the land, or in mid-sized communities, which mark Benjamin of Tudela’s itinerary and which al-Idrisi mentions in his *Geography*, with populations of no more than 5,000–15,000.⁴ A twelfth/thirteenth-century document, recently studied, reveals Lampsakos as a cluster of approximately 1,000 inhabitants, lacking both specific economic institutions and specific economic organization; its status as something more than a village was a function solely of its substantial trade with Constantinople.⁵ Although interpretable data are regrettably scarce for the Byzantine period, Ottoman records are revealing. In 1464–65, Serres had a population of approximately 6,000; Drama had fewer than 1,500.⁶ In the prosperous Asia Minor of the sixteenth century, a mid-sized town comprised 3,000–4,000 inhabitants, a large town between 10,000 and 15,000, a large “city” three or four times that.⁷ This shows the difference between Constantinople, which would certainly have had 250,000 inhabitants in the wake of its demographic

³ See M. Weber, *Die Stadt*, excerpted from *Wirtschaft und Gesellschaft*, reworked by Weber, and published separately in 1921, several months after his death, in the journal *Archiv für Sozialwissenschaft und Sozialpolitik*, and since published as a separate work in an English translation by D. Martindale and G. Neuwirth, *The City* (Glencoe, Ill., 1958), and in a French translation by P. Fritsch, *La Ville* (Paris, 1982). An analysis of the text appears in *Figures de la ville: Autour de Max Weber*, ed. A. Bourdin and M. Hirschborn (Paris, 1985).

⁴ *The Itinerary of Benjamin of Tudela*, ed. M. N. Adler (London, 1907); *La géographie d’Edrisi*, trans. P.-A. Jaubert, 2 vols. (Paris, 1836–40; repr. Amsterdam, 1975).

⁵ G. G. Litavrin, *Vizantiiskoe obshchestvo i gosudarstvo v X–XI vv.* (Moscow, 1977), 110–27; idem, “Provincial’nyi vizantiiskii gorod na rubezhe XII–XIII vv.,” *VizVrem* 37 (1976): 17–29.

⁶ P. Ş. Nüsturel and N. Beldiceanu, “Les églises byzantines et la situation économique de Drama, Serres et Zichna aux XIVe et XVe siècles,” *JÖB* 27 (1978): 269–85, esp. 271–73.

⁷ L. T. Erder and S. Faroqi, “The Development of the Anatolian Urban Network during the Sixteenth Century,” *Journal of the Economic and Social History of the Orient* 23 (1980): 265–303, cited by A. Harvey, *Economic Expansion in the Byzantine Empire, 900–1200* (Cambridge, 1989), 198–99.

recovery in the second half of the ninth century and nearly 400,000 under the Komnenian emperors,⁸ and the rest of the empire's urban centers.

This relativization of the urban phenomenon during the Middle Ages and the unequivocal contrast between mid-sized towns and the empire's singular megalopolis have evident consequences for how we define the urban economy. Max Weber established a sensible distinction among three levels of artisanal activity.⁹ (1) At a basic level, there is "demiurgical" activity, concentrated in the village and corresponding to household economy—only somewhat, if at all, specialized and more or less self-sufficient. (2) At the intermediate level—undoubtedly the most significant with respect to medieval towns—is the production of items for sale by the artisan himself or someone close to him: a relative, a friend, a member of the household, an employee; this presupposes a relatively higher degree of technical specialization, but a local market, or, at the limit, a narrowly circumscribed regional distribution. (3) Finally, there is a level of production that, even if not conducted on an industrial scale, exceeds local or regional demand and is put into the stream of commerce by a merchant rather than by the producer himself; thus ends the straddling of production and sale.

This cautious approach serves as a reminder at the outset that artisanal production is not synonymous with industry. In rural areas—whatever the location, whatever the era—peasants have, with the assistance of neighbors more skilled than they, built or repaired their houses; their wives have crafted homespun clothing, made pottery, tanned skins to make leather; any tools needed could be forged by a blacksmith. Even when these specific skills acquired the status of a specialization, it was not with the intent of creating markets, but in the interest of a complementarity that sought to minimize recourse to monetary exchange. Such was Kekaumenos' view in the eleventh century when he counseled a large landowner living on his own estate to have mills and workshops so that he would be dependent on no one;¹⁰ such was also the intent of the anonymous author of *De obsidione toleranda*, in listing the artisans that a town needed to resist a siege and that should be brought in from a neighboring region in the event of external threat.¹¹ The objects and rudimentary installations found in the fortified villages of Dinogetia on the lower Danube, or Rentina at the mouth of the Strymon, are associated with a system of social complementarity and not with an urban economy in the strict sense.¹² It is at Max Weber's second level that the basis of activity in Byzan-

⁸ See P. Magdalino, "Medieval Constantinople: Built Environment and Urban Development," *EHB*; idem, *Constantinople médiévale: Etudes sur l'évolution des structures urbaines* (Paris, 1996), 55–57.

⁹ M. Weber, *Wirtschaftsgeschichte: Abriss der universalen Sozial- und Wirtschaftsgeschichte*, 5th ed. (Berlin, 1991), 110ff; French edition and translation by C. Bouchindhomme, *Histoire économique: Esquisse d'une histoire universelle de l'économie et de la société* (Paris, 1991), 140ff; English edition and translation by F. Knight, *General Economic History* (Glencoe, Ill., 1927; repr. New Brunswick, N.J., 1981), 115ff.

¹⁰ *Cecaumeni Strategicon*, ed. B. Wassiliewsky et V. Jernstedt (St. Petersburg, 1896), 36–38 (§§ 88–91); *Sovety i rasskazy Kekavmena*, ed. G. Litavrin (Moscow, 1972), 188–92 (chap. 35).

¹¹ *Anonymus, De obsidione toleranda*, ed. H. van den Berg (Leiden, 1947), 47–48.

¹² I. Barnea, "Dinogetia, ville byzantine du Bas-Danube," *Byzantina* 10 (1980): 239–86; N. Moutsopoulos, "Ἀνασκαφὴ στὸν ὄχυρὸ βυζαντινὸ οἰκισμὸ τῆς Πεντίνης," *Πρακτ. Ἀρχ. Ἑτ.* (1986) [1990]: 154–55.

tine towns is to be situated, given the importance of itinerant sale and the system of the *ergasterion*, which most often functioned as both workshop and retail store. The main challenge to the Byzantine economy was advancing to the third level, that of the rationality of exchanges; such is one reading of the *Book of the Eparch*, whose regulations, discussed below, seek to impose a more pronounced differentiation among products and economic activities.

More recently, Karl Polanyi and his school have stressed the danger of applying the type of analysis that is appropriate to the contemporary world to ancient civilizations, or to civilizations that find themselves outside the modern mainstream; in these cultures, the economy is closely embedded in social relations and has not yet acquired its proper rationality or autonomy.¹³ Under this theory, one should distinguish the exceedingly rare cases during the Middle Ages in which trade was guided by a sort of self-regulation and influenced production and currency, from the much more frequent situations in which the market responded to basic demands without ever attaining a “national,” much less “international,” level, and in which money represented a means of exchange rather than a true standard of valuation. Particularly in highly centralized states like Byzantium, these two forms of exchange—the one closed and local, the other open, long-distance, and involving professional, often foreign, merchants—could coexist. It is essential, then, to examine the role of the state in regulating the system as a whole, and its policy of providing controlled access to privileged places of exchange (the port of trade) and sustaining a monetary system whose purpose was international. Such questions suggest a multilevel model of the Byzantine economy and link Constantinople, the quintessential port of trade, to a highly specialized role in relation to its unique demography, its urban structures, and its status as capital of the empire.

These theoretical approaches find immediate applicability to the analysis of the two great breaks in Byzantine history: the crisis in the seventh century—which, in the wake of the Slavic invasions and the Arab conquest, provoked a decided retrenchment of urban civilization and mapped out a new urban geography—and the turning point in the eleventh century, which manifested itself initially as an economic development in a climate of peace and territorial expansion, and subsequently as a recession. One might well ask whether this recession was economic or purely military and political at a time when the Turkish advance once again lopped off large portions of the empire and the emperor granted privileges to Venetian, Pisan, and Genoese merchants. Everything indicates that these events, separated by several centuries, modified a number of fundamental equilibria, and it is to be expected that they might serve to mark the broader history of Byzantium. One should nonetheless ask whether this periodization, so useful in tracing out the thread of events, remains applicable to the study of economic and social mechanisms over time.

¹³ K. Polanyi, C. M. Arensberg, and H. W. Pearson, *Trade and Market in the Early Empires: Economies in History and Theory* (Glencoe, Ill., 1957); useful studies of the work of Polanyi by L. Valensi et al. appear in *AnnalesESC* 29 (1974): 1309–80. See the analysis of A. E. Laiou, “Economic and Non-economic Exchange,” *EHB* 681–89.

The "Break" of the Seventh Century

The facts are known. In the Balkans, the frontier began to give way when the khagan of the Avars took the city of Sirmium in Pannonia in 582 and furthered the advance of the Slavs into Thessaly, Epiros, Achaia, and Hellas. The Danubian *limes*, reestablished around the year 600 by Maurice, gave way for good around 613–615, as the last fortified points succumbed: Naissus, Sardis, Justiniana Prima. Thessalonike alone resisted the numerous Avaro-Slavian sieges (in 586, 615, 618). Byzantium retook control of the territories it had lost, but only slowly and partially: Justinian II reached Thessalonike with difficulty in 688/89; Constantine V launched a decisive campaign against the Sklaviniiai in 758–759, but the surrender of the Slavs of Thessaly, Hellas, and the Peloponnese was secured only by the patrician Staurakios heading a large army in 782–783; a few pockets of resistance were defeated by the *strategos* Skleros in 805.¹⁴

In Asia Minor and in the East, the crisis began with the assassination of Maurice in 602. A little later, the Persian armies brought about the fall of the eastern provinces and opened access to Asia Minor. The counteroffensive launched by Herakleios beginning in 624 resulted in the capture of Dastagerd, the collapse of the Persian Empire, and the recovery of the purported relics of the True Cross, restored to Jerusalem on 21 March 630.¹⁵ The Arab conquest began almost immediately thereafter, however, and met with little resistance from an empire that was by now exhausted. The cities, which had acquired a de facto autonomy, most often preferred to bargain and to open up their gates. In 636 the battle of Yarmuk took place, and within four years Syria, Palestine, and subsequently Egypt were lost for good.¹⁶ The period that followed was but a slow consolidation, lasting more than a century, of a new frontier that consisted of the Taurus Mountains and Mesopotamia. The towns, reduced in both number and size, began to fortify themselves, and their social structures assumed a military character. Both camps, envisioning a state of permanent war, organized defensive networks: *thūgurs* on the Arab side, small border themes on the Byzantine side. With occasional advances and occasional retreats, this equilibrium lasted until the frontier was again breached, starting in 962, with the great campaigns of reconquest launched by Nikephoros II and Leo Phokas, John I Tzimiskes, and Basil II.

The turmoil did not spare Constantinople, which was severely affected by plague in 542 and subsequently forced to endure food shortages that began in 618, with the cessation of wheat imports from Egypt. The city resisted a united assault by the Avars

¹⁴ For the chronology, see P. Lemerle, *Les plus anciens recueils des Miracles de Saint Démétrius et la pénétration slave dans les Balkans*, vol. 2 (Paris, 1981). Cf. A. E. Laiou, "Exchange and Trade, Seventh–Twelfth Centuries," *EHB* 700–702.

¹⁵ Shahrbaraz crossed the Euphrates in 610; Antioch was taken in 611; Cilicia fell in 613. Shahin captured Caesarea in Cappadocia in 611 and reached Chalcedon. Shahrbaraz subsequently took Palestine (Jerusalem was captured in 614 in a bloody battle) and Egypt (Alexandria was taken in 619). A chronological analysis of the sources appears in B. Flusin, *Saint Anastase le Perse et l'histoire de la Palestine au VIIe siècle* (Paris, 1992), 2:67–181.

¹⁶ On the Arab conquest, see F. M. Donner, *The Early Islamic Conquests* (Princeton, N.J., 1981).

and the Persians in 626, held out against the arduous Arab sieges of 674–678 and 717–718, only to face another plague epidemic in 747–748. We are told that Herakleios considered transferring the capital of the empire to Carthage, and his grandson Constans II settled in Syracuse in 663. Patriarch Nikephoros I describes the city as nearly emptied of its inhabitants.¹⁷ Constantinople thereafter witnessed a significant demographic decline as its population dropped from 500,000 to perhaps 40,000 or 50,000. The urban environment changed profoundly: the capacity of the harbor declined; of the old public granaries, only one survived.¹⁸ In 740, following an earthquake that damaged the town walls, Emperor Leo III determined that the city's inhabitants lacked the means to undertake the needed repairs and sought to finance them by means of a special tax added to the land tax levied throughout the empire.¹⁹ To remedy a drought that had emptied the cisterns of Constantinople, Constantine V tried to restore the so-called Aqueduct of Valens, cut in 626; he was only able to do so at great expense in 768 by bringing in 6,700 laborers or building workers from Thrace, Greece, Asia, and the Pontos, especially masons and brickmakers.²⁰

A review of different types of sources leaves no doubt of the diagnosis. During this long crisis many cities disappeared; the geographic distribution of urban centers changed; towns became ruralized and their functions changed. The city of antiquity, in short, gave way to the medieval town.²¹

The conciliar lists and the *Notitiae Episcopatum* trace the shrinking of the empire and its subsequent slow revival.²² The presence of bishops at the councils of the seventh century (Constantinople III in 680–681; the Council in Trullo, 691–692)²³ was scant with respect to territories still under Byzantine domination (157 and 200 bishops, respectively, attended). The ruined Balkans sent only a small number of bishops (18 for

¹⁷ Nikephoros, *Patriarch of Constantinople, Short History*, ed. C. Mango (Washington, D.C., 1990), 140 (§ 68) (hereafter Nikephoros, *Short History*).

¹⁸ C. Mango, *Le développement urbain de Constantinople, IV^e–VII^e siècles* (Paris, 1985), 51–62; see Magdalino, “Medieval Constantinople.”

¹⁹ Theophanes, *Chronographia*, ed. C. de Boor, 2 vols. (Leipzig, 1883–85; repr. Hildesheim, 1963), 1:412 (hereafter Theophanes).

²⁰ Ibid., 1:440; Nikephoros, *Short History*, 160 (§ 85).

²¹ On the question of the “break” versus the continuity of urban civilization in the 7th century, see E. Kirsten, “Die byzantinische Stadt,” in *Berichte zum XI. Internationalen Byzantinisten-Kongress* (Munich, 1958), 5.3:1–48; G. Ostrogorsky, “Byzantine Cities in the Early Middle Ages,” *DOP* 13 (1959): 47–66; D. A. Zakythinos, “La grande brèche,” in *Χαριστήριον εις Ἀναστάσιον Κ. Ὁρλάνδον* (Athens, 1966), 3:300–27; M. F. Hendy, *Studies in the Byzantine Monetary Economy c. 300–1450* (Cambridge, 1985), 78–85 (on the Balkans), 619–67 (on the consequences); J. F. Haldon, *Byzantium in the Seventh Century: The Transformation of a Culture* (Cambridge, 1990), 93–124. Summary in Harvey, *Economic Expansion*, 21–29.

²² These lists, first used by Ostrogorsky (“Byzantine Cities”) have a significant margin of unreliability and error, but nonetheless constitute invaluable benchmarks, since each ecclesiastical see corresponds, in principle, to a city.

²³ R. Riedinger, *Die Präsenz- und Subskriptionslisten des VI. oekumenischen Konzils (680–681) und der Papyrus Vind. g. 3* (Munich, 1979); H. Ohme, *Das Concilium Quinisextum und seine Bischofsliste* (Berlin, 1990).

the two councils combined), who came exclusively from coastal areas or those near the sea, from the provinces of Europa, Rhodope, Macedonia, Hellas, and Epiros. The metropolitans of Thessalonike, Herakleia, and Corinth are listed in 691–692, but their names are not followed by any signature; new ecclesiastical sees begin to appear. The absences are less flagrant with respect to Asia Minor, and certain provinces such as Paphlagonia and Galatia display a remarkable stability. A century later, at the Second Council of Nicaea in 787, the number in attendance (365) shows a marked advance,²⁴ and the distribution of the attendees is evidence of a slow recovery in Thrace, Macedonia, and central Greece along the major communication axis (the Via Egnatia). Twelve new metropolitan sees come on the scene. All of this may be seen as the result not only of the creation of the themes but also of an imperial policy that, under Constantine V, Irene, and Nikephoros II Phokas in particular, restored a number of destroyed cities, created new centers, and undertook population transfers to redress the imbalance between Asia Minor and the Balkans. The Photian Council of 879–880—the only ecumenical council in the ninth century—counted 383 bishops in attendance and is evidence of a clear recovery in Thrace, Thessaly (Larissa, Demetrias), and the Peloponnese (Patras, Methone). The *Notitia Episcopatum* documents the intervening changes for the first time: it quantifies the number of sees under the first patriarchate of Nicholas I Mystikos (901–907), enumerating 139 bishops, archbishops, or metropolitans in the Balkans, 442 in Asia Minor, 22 in Rhodes and in the islands, and 34 in southern Italy and in Sicily.²⁵ Such was, more or less, the new urban geography of the empire.

A separate chapter²⁶ analyzes coin finds, which, with significant variations among the different sites, give evidence of a decline or an interruption of monetary circulation in 610—in particular after the reign of Constans II (668)—and, thereafter, a staggered recovery under Theophilos (829–842), Basil I (867–886), and Leo VI (886–912).

Excavations and studies in geographic history confirm both the impoverishment of the urban network and the great diversity of individual cases.²⁷ The Balkans were the most affected: Stobi and Sirmium close to the Danube simply ceased to exist, whereas in Serdica, Adrianople, Naissus, and Philippopolis we find traces of continuity. Sources after the seventh century no longer mention Thebes in Phthiotis and other Thessalian towns of lesser importance. In Greece, Corinth, Athens, and Thebes shrank in size; in Asia Minor, those towns that put up resistance against sieges or whose inhabitants did

²⁴ J. Munitiz, "Synoptic Account of the Seventh Council," *REB* 32 (1974): 147–86; J. Darrouzès, "Les listes épiscopales du concile de Nicée (787)," *REB* 33 (1975): 5–76.

²⁵ This is *Notitia* 7 of J. Darrouzès, *Notitiae episcopatum Ecclesiae Constantinopolitanae* (Paris, 1981), 53–78, 269–88.

²⁶ See C. Morrisson, "Byzantine Money: Its Production and Circulation," *EHB*.

²⁷ J. Russell, "Transformations in Early Byzantine Urban Life: The Contribution and Limitations of Archaeological Evidence," in *The 17th International Byzantine Congress: Major Papers* (New Rochelle, N.Y., 1986), 137–54. Cf. Ch. Bouras, "Aspects of the Byzantine City: Eighth–Fifteenth Centuries," *EHB* 501ff; see also the *EHB* case studies: C. Foss and J. A. Scott, "Sardis"; K. Rheidt, "The Urban Economy of Pergamon"; A. Louvi-Kizi, "Thebes"; M. Kazanaki-Lappa, "Medieval Athens"; and G. D. R. Sanders, "Corinth."

not seek refuge on protected sites lost a good part of their populations, and they clustered around fortified areas;²⁸ Ibn Khordadbeh describes them as simple fortresses. In the ancient province of Asia, incorporated at this point into the theme of Thrakesion, Ephesos (in 614) and Sardis (in 616) were destroyed by the Persians. Pergamon (in 663 and 716) and Smyrna (in 654 and 672) were captured by the Arabs. Ephesos, during the seventh and eighth centuries, temporarily abandoned its harbor to regroup houses, churches, and market stalls on a fortified hill, which in the ninth century became a vibrant and quite wealthy agglomeration that served as the capital of the theme. Despite a number of public works undertaken by Constans II around 660, Sardis never again became a large city: a fortress was erected on its acropolis in the ninth to tenth centuries; a few houses and a chapel surrounded a fortified castle. At Pergamon, a wall of reused masonry dating to the reign of Constans II encircled the acropolis; a slow demographic recovery under the Macedonian emperors and in the eleventh century undoubtedly explains the construction, under Manuel Komnenos, of a new wall that includes the lower city. Michael III, around 856–857, refortified the city of Smyrna, which became independent of Ephesos and was ranked a “metropolis” in 867; like the majority of Asiatic cities, however, it assumed a relative level of prosperity and an urban aspect only under the Laskarid dynasty in the thirteenth century.

Continuity? Discontinuity? It matters little.²⁹ Whether they survived or disappeared, cities changed between the end of the sixth century and the middle of the ninth century—in appearance, in function, and in definition.³⁰ A “right” or a hierarchical catalogue of cities no longer existed, except to establish the precedence of sees in an ecclesiastical geography that sustained the ancient provincial demarcations. Under the thematic system, at least until the eleventh century, administrative, fiscal, and military control was no longer ordinarily exercised through a network of cities. City dwellers were not recognized as having a special status well before Leo VI so acknowledged by officially rescinding the legal provisions regarding the *curiae* and the order of *curiales*.³¹ Cities were administered by “notables,” socially but no longer institutionally defined, of whom the bishop was the natural leader. The use of the term *polis*, which implied a

²⁸ For the cities of Asia Minor, see in particular C. Foss, *Byzantine and Turkish Sardis* (Cambridge, Mass., 1976); idem, “Archaeology and the ‘Twenty Cities’ of Byzantine Asia,” *AJA* 81 (1977): 469–86; idem, *Ephesus after Antiquity: A Late Antique, Byzantine and Turkish City* (Cambridge, 1979); W. Brandes, *Die Städte Kleinasien im 7. und 8. Jahrhundert* (Berlin, 1989).

²⁹ On this problem, which seems in my view to be meaningful only within a Marxist perspective, see A. P. Kazhdan and A. Cutler, “Continuity and Discontinuity in Byzantine History,” *Byzantion* 52 (1982): 429–78, and the reply of G. Weiss, “Antike und Byzanz: Die Kontinuität der Gesellschaftsstruktur,” *Historische Zeitschrift* 224 (1977): 529–60. On periodization from the Marxist perspective, see the studies of Soviet Byzantinists conveniently assembled in translation in *Le féodalisme à Byzance: Problèmes du mode de production de l’Empire byzantin*, ed. H. Antoniadis-Bibicou (Paris, 1974).

³⁰ On this issue, see the fundamental study of C. Bouras, “City and Village: Urban Design and Architecture,” *JÖB* 31.2 (1981): 611–53; J. F. Haldon and H. Kennedy, “The Arab-Byzantine Frontier in the Eighth and Ninth Centuries: Military Organisation and Society in the Borderlands,” *ZRVI* 19 (1980): 79–116; Haldon, *Byzantium*, 92–124.

³¹ *Les Nouvelles de Léon VI le Sage*, ed. P. Noailles and A. Dain (Paris, 1944), Nov. 46–47 (pp. 182–87).

degree of autonomy in administration, was no longer compelling (except for Constantinople), and a number of synonyms from this point forward stress the defensive aspect of urban sites: *kastron*, *phourion*. Defense, to be sure, was the first characteristic of these towns that withdrew into the safety of protected locations, inside a fortified enclosure, or in the shadow of a fortress that replaced or reinforced city walls. The second was the impoverishment of the city's appearance, the result of the ending of patronage and *liturgia*, a change in the way of life and of social intercourse (baths, stadiums, and hippodromes came to an end), the abandonment of the rules of urban life and of a number of taboos, such as burial *intra muros*, the privatization of public spaces, and the rapid redistribution of the landed property in towns. In a climate of insecurity, of relative economic autarky, and of a militarized society, the town assumed somewhat different functions: it ensured the security of its residents and was used as a refuge by the surrounding rural population, particularly in frontier regions; it served as a way station or a cantonment site for movements of the army; it functioned as a market for exchange, ensuring the commercialization of basic products on a modest, regional scale; it ensured the transfer to the army and the central administrative agencies of fiscal revenues levied on rural populations. This latter function may well have contributed to maintaining the elements of an urban civilization (money, fiscality, a legal system) in a society that was no longer fundamentally predicated on the existence of cities.

The "Turning Point" of the End of the Eleventh Century

In the period of stabilization and of subsequent stability of the ninth to tenth centuries, the role of the state should not be underestimated. Dynastic continuity (the Macedonian emperors reigned from 867 until 1028), stabilization of the borders followed by territorial growth, a currency operating at fixed equivalences after Theophilos' reform and a stable gold coinage, a well-established and relatively effective tax system, sustained legislative activity and economic regulation (at least with respect to Constantinople); all these structural and centralizing elements favored the rise of the city during this period. Little by little, they disappeared during the eleventh century with the rise of political instability and, particularly after 1071, with the lasting settlement of the Anatolian plateau by the Turks; the latter provoked a new geographic imbalance—this time, in favor of the Balkans. However, at the same time that the state found itself weakened, the urban economy sustained a marked development, raising three main questions for historians. Was this relative expansion of the cities accompanied by a demographic upturn in the countryside, or did it reflect land abandonment? Did the years 1070/1080 represent a new "break"? Finally, did the trading privileges granted to the Italian merchants handicap or stimulate the urban economy?³²

Regarding the first point, it is now believed that a slow and steady demographic rise during the eleventh and twelfth centuries affected both towns and the countryside.

³² See J. Lefort, "The Rural Economy, Seventh–Twelfth Centuries," *EHB* 271ff, and Laiou, "Exchange and Trade," 751f.

Regarding the second, it has become customary to distinguish the “civilian” emperors of the period from 1025 to 1081, who favored the development of a middle class in the cities (and especially in Constantinople), from the “military” Komnenian emperors, who relied on a feudal élite whose base was provincial and essentially rural. Between the two, there occurred a change in dynasties and the symbolic battle of Mantzikert. The traditional schematic makes somewhat hasty connections between political, social, and economic phenomena, which do not necessarily march in lockstep. Cécile Morrisson’s analysis of the monetary “devaluations” of the eleventh century allows us to distinguish between an expansionary phase (lasting until approximately 1067) and a subsequent recessionary phase (beginning with the reign of Romanos IV Diogenes), during which a veritable monetary crisis raged, linked to military defeats and to the need to replenish a treasury that had been left high and dry.³³ The third issue is directly tied to the second. It has long been held that at the end of a period that should have given Byzantium the same opportunities for development as the West, the restored empire of the Komnenoi turned inward and sacrificed its economic future by granting to the Venetians, the Genoese, and the Pisans exorbitant economic advantages in exchange for illusory diplomatic or military successes. Against this theory, which strains somewhat to draw together political history and economic history and grants primary importance to the role of the state, Michael Hendy and subsequently Ralph-Johannes Lilie have constructed an analysis in which the following points stand out.³⁴ (1) The territorial foundations of Byzantium were, prior to 1204, more solid and extensive than has heretofore been credited. (2) The privileges granted to the Italians were, until this point, riddled with exceptions (Cyprus, the Black Sea) that significantly limited their import. (3) Italian investments in the twelfth century remained well below the level of Byzantine private fortunes. (4) Western demand had a stimulative effect, as evidenced by the continuous rise of a number of urban centers, among them Corinth, Athens, and Thebes, which do not constitute exceptional cases.

It is also true, moreover, that the flourishing economy of Byzantium in the twelfth century can only be understood in the context of the widespread movements that reanimated the Mediterranean, testimony for which is provided by the Arab geographer al-Idrisi and the traveling Jew from Spain, Benjamin of Tudela.³⁵ Al-Idrisi, who often makes use of earlier documents, cites in particular, both on the shores of the Sea of Marmara and in Greece, towns “in which one finds artisans and craftsmen.” Benjamin of Tudela, in the 1160s, documents the importance of the Jewish communities in the localities that he crosses (notably Arta, Patras, Corinth, Thebes, Chalkis, Almyros,

³³ See Morrisson, “Money,” 930ff.

³⁴ M. F. Hendy, “Byzantium, 1081–1204: An Economic Reappraisal,” *Transactions of the Royal Historical Society*, 5th ser., 20 (1970): 31–52; repr. in idem, *The Economy, Fiscal Administration, and Coinage of Byzantium* (Northampton, 1989), art. 2, together with a supplement, “Byzantium, 1081–1204: The Economy Revisited”; R.-J. Lilie, *Handel und Politik zwischen dem byzantinischen Reich und den italienischen Kommunen Venedig, Pisa und Genua in der Epoche der Komnenen und der Angeloi, 1081–1204* (Amsterdam, 1984). Cf. Laiou, “Exchange and Trade,” 736ff.

³⁵ See above, note 4.

Thessalonike, Drama, Constantinople, Rhaidestos, Gallipoli) and in the islands or ports at which he lands before reaching Antioch (Mytilene, Chios, Samos, Rhodes, Cyprus, Korykos, Mamistra); this surely constitutes a measure of artisanal and commercial activity.

Sketching an Urban Geography

In any description of the urban geography of Byzantium, two cities stand out from the rest. First and foremost was Constantinople, the sole *megalopolis*. In the wake of the expansion of Islam, its population was no longer completely exceptional in the Mediterranean world, but it remained so in the context of the Byzantine Empire. As the capital, it sheltered the institution of empire, and its *populus* as a result played an important political role. Economic regulation tended to ensure simultaneously the satisfaction of needs and control over production and exchanges. In Constantinople there coexisted a local artisanal industry, regional exchanges with Thrace and Bithynia, and great international commerce. Thessalonike, to a lesser degree, exhibited the same characteristics: the city was a recognized center of artisanal activity in metalwork, glass, clothing, and fur; it was also the agricultural outlet for a large Balkan hinterland and the meeting point for trade with the Bulgarians and the Slavs. The great fair of St. Demetrios assuredly fulfilled the latter two functions.³⁶ Certain Constantinopolitan institutions, moreover, appear in Thessalonike and seem to correspond to a deliberate effort to create a second pole of attraction and economic control; there may have been, in the eighth and ninth centuries, a city eparch and undoubtedly also functionaries (whose title of *abydikoi* is significant), charged with collecting taxes and controlling imports of the merchandise from the Bulgarian territories that entered through the valleys of the Morava, the Strymon, and the Nestos rivers.³⁷

Starting from Constantinople and, to a lesser degree, from Thessalonike, we can demarcate zones of influence, trace routes of travel and commerce, and enumerate a certain number of towns whose economic importance was a function either of their proximity to Constantinople or of the fact that they served as stopping points or more distant outlets for the capital. In the first years of the seventh century, the *Doctrina Jacobi* lists the ports frequented by a "bad egg" from Constantinople, ports in which he rediscovers the urban solidarity of the Blues and the Greens: Pylai, Pythia, Kyzikos, Charax.³⁸ This Constantinopolitan hinterland extended to the cities of Nikomedeia, Prousa, and Nicaea—all of which played a major role in its provisioning—as did the *emporion* of the Hellespont. At a greater distance, Sinope, Amisos, and Trebizond, on

³⁶ See also Laiou, "Exchange and Trade," 756.

³⁷ A. Konstantakopoulou, "L'éparque de Thessalonique: Les origines d'une institution administrative (VIIIe–IXe siècle)," in *Communications grecques présentées au Ve Congrès international des Etudes du Sud-Est Européen, 11–17 septembre 1984* (Athens, 1985), 157–62; N. Oikonomides, "Le kommerkion d'Abydos: Thessalonique et le commerce bulgare au IXe siècle," in *Hommes et richesses dans l'Empire byzantin*, 2 vols. (Paris, 1989–91), 2:241–48.

³⁸ *Doctrina Jacobi nuper baptizati*, ed. V. Déroche, in G. Dagron and V. Déroche, "Juifs et chrétiens dans l'Orient du VIIe siècle," *TM* 11 (1991): 1.41, pp. 30–31.

the southern coast of the Black Sea, played the dual role of regional centers—with the fairs of St. Eugenios and St. Phokas—and of towns through which cloth and other products of large-scale Constantinopolitan trade were conveyed toward Kherson, the Caucasus, the northern territories, and central Asia.³⁹ On the southern coast of Asia Minor, Attaleia, in which substantial Armenian, Jewish, Arab, and, ultimately, Italian communities maintained a strong presence and which Ibn Hawqal situates at eight-days' distance from Constantinople,⁴⁰ owed little to its relations with the other towns of Anatolia and much to its direct ties with the capital.

In Asia Minor, a marked difference separated towns that revolved within the orbit of Constantinople from those that functioned as stopping points, military camps, or fortresses. Starting with the end of the eleventh century, moreover, a good portion of Anatolia was lost to the Turkish advance; a shifting frontier was drawn between Byzantium and the Danişmendids to the north, and the Seljuks of Konya to the south. The war did not completely interrupt commercial exchanges, but it did limit them, and imperial policy consisted in fortifying those towns that served a rural function to transform them into bases of military operations for local resistance or for limited reconquests.

In the Balkans, conversely, on which the provisioning of Constantinople depended more directly and within which the Normans undertook raids without managing to gain a foothold, the towns gathered strength. Thessaly is one example of a prosperous regional economy.⁴¹ The invasions of the seventh century had managed to lay waste a few antique cities, but others emerged, such as Larissa, a large rural town situated at a crossroads, which became the metropolis of Hellas in the tenth and eleventh centuries and the seat of a *strategos*, or the port of Demetrias on the Pagasitic Gulf, which was supplanted in the course of the twelfth century by Almyros, a town that al-Idrisi describes as well populated, in which Benjamin of Tudela counts four hundred Jews, and whose advancement was ensured in large part by Italian merchants. The coastal sites of Greece, prey to piracy and to Venetian ambitions, also benefited from the reawakening of the Mediterranean. Mention should, finally, be made of three other towns that, after contracting considerably during the seventh through the ninth centuries, occupied an especially important position in the urban economy of the eleventh and twelfth centuries, in particular as a result of their role in the weaving and manufacture of silk cloth: Thebes, the capital of a theme and the center of a rich and well-populated agricultural region that exported food products; Corinth, which also housed workshops for ceramics and glasswork; and Athens, which specialized in, among other trades, the dyeing of purple cloth.⁴² These cities of *archontes* were known for their lux-

³⁹ See A. Bryer and D. Winfield, *The Byzantine Monuments and Topography of the Pontos*, 2 vols. (Washington, D.C., 1985), and the studies of A. Bryer collected in *The Empire of Trebizond and the Pontos* (London, 1980).

⁴⁰ Ibn Hawqal, *Configuration de la terre (Kitab Surat al-Ard)*, trans. J. H. Kramers and G. Wiet, 2 vols. (Beirut-Paris, 1964), 1:196.

⁴¹ A. M. Avramea, 'Η βυζαντινή Θεσσαλία μέχρι τοῦ 1204: Συμβολή εἰς τὴν ἱστορικὴν γεωγραφίαν (Athens, 1974).

⁴² See Louvi-Kizi, "Thebes"; Kazanaki-Lappa, "Medieval Athens"; and Sanders, "Corinth."

ury artisanal work (in 1147 the Normans, having pillaged Thebes, deported the silk embroiderers and silk weavers to Sicily).⁴³ The three occupied a high rank in an international commerce that no longer centered solely around Constantinople.

These various issues are treated in greater detail in other chapters of this book. I have sought here, by way of introduction, only to mark the salient points of an evolutionary trend and bring to mind a few models: the *megalopolis* and its hinterland; the regional capital and its modest urban network; the *kastron*/garrison town, situated in regions of permanent warfare; and, finally, the several new commercial sites, the rise of which was the result of the general development of exchange in the Mediterranean region. The diversity of these institutions needs to be stressed at the outset before attempting a description of the urban economy, which, in the absence of large and diverse source material, will not take those issues sufficiently into account.

The Social Structure of Production and Sale

The Corporations (Guilds)

From Antiquity to the Book of the Eparch Under the Roman tradition, which Byzantium prolonged, the corporations, or guilds, were first and foremost a form of association that brought individuals together into a recognized entity—that is, one that could act as a legal “person” and receive bequests—to defend its members’ interests, ensure the performance of funerary rites, promote devotions, help the poor, or, quite simply, taste the pleasures of social intercourse.⁴⁴ Premised on the exercise of a trade, this bond was more specifically intended to stem competition, to represent the profession to public authorities, and, in a number of cases, to transmit technical knowledge by means of apprenticeship. It is essential to stress at the outset this need for solidarity

⁴³ *Nicetae Choniatae, Historia*, ed. J. L. van Dieten (Berlin–New York, 1975), 73–76 (hereafter Choniates); see Laiou, “Exchange and Trade,” 739, 746ff.

⁴⁴ Citations to the *Book of the Eparch* (Τὸ Ἐπαρχικὸν βιβλίον, cited hereafter as *EB*) are to the most recent edition and translation, J. Koder, ed., *Das Eparchenbuch Leons des Weisen* (Vienna, 1991), with occasional references to the edition of J. Nicole, *Le livre du préfet* (Geneva, 1893), and to the commentaries of M. J. Siuziumov, *Vizantiiskaia kniga Eparkha: Vstupitel'naia stat'ia, perevod, kommentarii* (Moscow, 1962). For useful studies on the subject, see: A. P. Christophilopoulos, “Περὶ τὸ Ἐπαρχικὸν βιβλίον,” *ΕΕΒΣ* 23 (1953): 152–59, reprinted in *Δίκαιον καὶ ἱστορία: Μικρὰ μελετήματα* (Athens, 1973), 130–37; idem, *Τὸ Ἐπαρχικὸν βιβλίον Λέοντος τοῦ Σοφοῦ καὶ αἱ συντεχνίαι ἐν Βυζαντίῳ* (Athens, 1935); idem, “Ζητήματα τινὰ ἐκ τοῦ ἐπαρχικοῦ βιβλίου,” *Hellenika* 11 (1939): 125–36, repr. in *Δίκαιον καὶ ἱστορία* (as above), 119–29; E. Francès, “L’état et les métiers à Byzance,” *BSI* 23 (1962): 231–49; A. P. Kazhdan, “Tsekhi i gosudarstvennye masterskie v Konstantinopole v IX–X vv.,” *VizVrem* 6 (1953): 132–55; J. Koder, “Επαγγέλματα σχετικά με τον επισιτισμό στο Επαρχικό Βιβλίο,” in *Πρακτικά του Α' Διεθνούς Συμποσίου: Η καθημερινή Ζωή στο Βυζάντιο* ed. C. Maltezou (Athens, 1989), 363–71; idem, “Überlegungen zu Aufbau und Entstehung des Eparchikon Biblion,” in *Kathegetria: Essays Presented to Joan Hussey on Her 80th Birthday*, ed. J. Chrysostomides (Camberley, 1988), 85–97; B. Mendl, “Les corporations byzantines (Οἱ μὴ ἐν τῇ ἀπογραφῇ ὄντες),” *BSI* 22 (1961): 302–19; G. Mickwitz, *Die Kartellfunktionen der Zünfte und ihre Bedeutung bei der Entstehung des Zunftwesens* (Helsinki, 1936); P. Schreiner, “Die Organisation byzantinischer Kaufleute und Handwerker,” in *Untersuchungen zu Handel und Verkehr der vor- und frühgeschichtlichen Zeit in Mittel- und Nordeuropa*, vol. 6, *Organisationsformen der Kaufmannsvereinigungen in der Spätantike und im frühen Mittelalter*, ed. H. Jankuhn and E. Ebel (Göttingen, 1989), 44–61; A. Stöckle, *Spätromische und byzantinische Zünfte* (Leipzig, 1911; repr. Aalen, 1963).

and integration into the urban society, before stating that the *collegia* and the *corpora*, by virtue of their representational functions, sometimes acted as pressure groups and lost their independence by becoming the political clientele of ambitious patrons or by accepting imperial protection. Beginning in the third century, the guilds became the instruments of economic planning in the hands of a state that sought to assign artisans to their trade by heredity, to control prices, and to avert shortages.⁴⁵

The legal codes contain a good number of vestiges of this situation, in particular the affirmation that the guilds of Constantinople were subject to the city eparch; the guilds were, however, subject to his control on the same terms as the citizenry or the *demes*.⁴⁶ For all that, the fundamental nature of the guilds did not alter, nor did they become simple conduits for the administration of the city, that is, the central power. The artisans of the building trade would not have declared a strike at Sardis in 459,⁴⁷ nor would the representatives of the trades of the capital have lobbied Justinian for a fairer reckoning of their fiscal contributions,⁴⁸ nor would the funerary epigraphs of the little town of Korykos have expressed pride in belonging to a σύστημα,⁴⁹ had the professional associations been entirely under state control. Rather, one should take into account that throughout their history the guilds were, to different degrees, simultaneously associations that freely defended corporate interests, organizations through which the state sought to control the economy, and, in certain circumstances, the spearhead for political action, in the same manner as the circus factions. The balance among these three functions differed by period; it is also tied to the nature of the source material. Normative texts stress the guardianship functions of the prefecture, while historians emphasize the disturbances brought about by the “tradesmen.” Regrettably, the associative and professional aspects of the guilds held little interest for ancient authors.

After the first quarter of the seventh century and until the beginning of the tenth, the sources no longer mention the corporations/guilds, which might give the impression that the institution itself had disappeared. We find only rare mentions of “people of the workshops,” which supports neither the conclusion that a breach took place, nor that there was continuity. “People of the workshops” (ἐργαστηριακοί) accompanied Herakleios when he left Constantinople in 623 to confront the khagan of the Avars;⁵⁰ in 695 they participated, as did the senators, in the arming of a fleet against Kherson;⁵¹

⁴⁵ On all these points see the excellent summary by L. Cracco Ruggini, “Le associazioni professionali nel mondo romano-bizantino,” in *Artigianato e tecnica nella società dell’alto medioevo occidentale* (Spoleto, 1971), 1:59–193. See also A. Graeber, *Untersuchungen zum spätromischen Korporationswesen* (Frankfurt am Main, 1983).

⁴⁶ *CI* 1.28.4 = *Bas.* 6.4.13: Πάντα τὰ ἐν Κωνσταντινουπόλει σωματεῖα καὶ οἱ πολῖται καὶ οἱ ἀπὸ τοῦ δήμου πάντες τῷ ἐπάρχῳ τῆς πόλεως ὑποκεῖσθωσαν.

⁴⁷ Foss, *Sardis*, 19–20 and n. 5, 110–13.

⁴⁸ *CIC* 3:316–24, *Nov.* 59; see below, 415–16.

⁴⁹ K. P. Mentzou, Συμβολαὶ εἰς τὴν μελέτην τοῦ οἰκονομικοῦ καὶ κοινωνικοῦ βίου τῆς πρώϊμου βυζαντινῆς περιόδου (Athens, 1975), which summarizes the points by classifying the inscriptions, in particular those of *Monumenta Asiae Minoris Antiqua*, according to profession.

⁵⁰ *Chronicon Paschale*, ed. L. Dindorf, 2 vols. (Bonn, 1822), 1:712 (line 15).

⁵¹ Theophanes, ed. de Boor, 377 (line 29).

their representatives are cited in 776 among the recognized entities from whom Leo IV sought an oath of fidelity to the dynasty.⁵² To be sure, these texts do not make explicit mention of guilds, but their interpretation would be problematical had not artisanal activity and commerce maintained a minimal degree of organization. At the same time, this relative silence is hardly surprising given the weakening—even the collapse—of urban structures, the depopulation and ruralization of the towns, and the autarkical tendencies that kept the urban economy operating at an extremely low level. With the return to equilibrium, however, the *Book of the Eparch* enables us to pick up the thread of a tradition that had been suspended rather than interrupted, for it describes the guilds, from its own perspective, without any indication that they might be something new.

Between the abundant sources of late antiquity and those of the eleventh to twelfth centuries, the *Book of the Eparch* constitutes an almost unique source. Leo VI promulgated this collection of legal provisions in 911/912, undoubtedly after scouring the archives of the prefecture, submitting a draft to jurists, and adding an all-purpose prologue to the beginning of this regulation hastily transformed into law.⁵³ The *Book of the Eparch* retains certain characteristics of its origin: it has the appearance, but not the coherence, of a legislative text,⁵⁴ and the only complete manuscript that has come down to us shows traces of later revisions, as if it were a simple working document.⁵⁵ In addition, its objectives are limited: it deals with neither the urban economy nor with guilds in a general sense; rather it describes the organization and the supervision of a certain number of trades peculiar to Constantinople: those that involved juridical practices (notaries), money (money changers), the manufacture, sale, and possible export of high-value products in which the state held a direct interest (goldsmithing, silk), specialty trades in which fraud was common (chandlers, soapmakers), trades that received imperial commissions (leatherworking), and especially those that had to do with the provisioning of the urban population, where regular supplies and a relative price stability were preconditions of social order. It would thus be imprudent to derive from the *Book of the Eparch*, valuable though it is, a model applicable to all sectors and all regions in the entirety of the empire: not only are many of the artisanal activities that were organized as guilds not mentioned therein (or, if so, only allusively),⁵⁶ but the work does not take into account parallel networks of production or of commerce over which the prefecture did not exercise direct control.

⁵² Ibid., 449–50; these examples are analyzed by Schreiner, “Organisation,” 46–48.

⁵³ See J. Koder, “Überlegungen,” and the introduction to *Eparchenbuch*, 31–32; Schreiner, “Organisation,” 48–50. The manuscript Hagiou Taphou 25, provides only the *prooimion* with a full title that includes a date.

⁵⁴ The regulation of trades was not, moreover, an object of legislation. Neither the *Basilics* nor the law manuals discuss the matter; like the “laws of urbanism,” it fell under *Ta eparchika*.

⁵⁵ Regarding the manuscript tradition, see the introduction by Koder to *Eparchenbuch*, 42–57.

⁵⁶ See, for example, the last chapter regarding the building trades, which makes reference to guilds that were not the subject of specific regulations.

The Functioning of the Guilds While there were no distinctions of status among the guilds,⁵⁷ there were, nonetheless, great disparities. The names of the guilds varied, as did the titles of their officials, the terms of admission, and the entry fees ceded to the eparch, to the guild itself, or to other members. The wish to codify practice did not manage to erase professional particularities, rooted, undoubtedly, in ancient tradition. The guilds are in the first instance presented as communities (σύλλογος, κοινότης τοῦ συστήματος).⁵⁸ Sometimes it is specified that they were organized as professional training entities, conducting that function either through qualified instruction⁵⁹ or through simple apprenticeships,⁶⁰ and that they admitted new members or at least proposed and defended their candidacy.⁶¹ They managed funds (supplied in particular by annual assessments or by entry fees levied on new members),⁶² which financed the performance of certain corvées, or the ceremonies, processions, and celebrations attendant upon the feast of a patron saint, the initiation of a new member, or the funeral of a deceased associate.⁶³ Numerous provisions have to do with rules of mutual courtesy and of moral obligation, as well as the arbitration functions of the head of the guild in the event of infractions, be it a lapse of manners on the part of a notary failing to salute his colleague, a quarrel between goldsmiths regarding an appraisal,⁶⁴ or unfair competition.⁶⁵ These communities were thus quite lively and active, even if the system of prefectural regulation viewed them above all as instruments of control, economic regulation, and fiscal apportionment.

The terms of admission appear to have been extremely varied. One exceptional case—the admission of a new notary into a *syllagos* limited to twenty-four members—entailed statements by witnesses and guarantors, an examination of the candidate's knowledge and competence, deliberation and vote by the notaries and professors of law, nomination by the eparch, and finally an oath by the candidate, who subsequently paid 3 nomismata to the *primikerios*, one to each of his colleagues, and six “for the pot,”

⁵⁷ The expression πολιτικά σωματεία simply means “guilds of the City” (= of Constantinople), and there are no grounds for making a distinction between “public” guilds and “independent” guilds, for which there is no evidence. Schreiner, “Organisation,” 50, 52, 56.

⁵⁸ *EB*, 5.3; 6.8; 9.3.

⁵⁹ *EB*, 1.13–14, with respect to notaries.

⁶⁰ See below, 411–12 and notes 138–40.

⁶¹ *EB*, 1.1, 3; 4.5.

⁶² *EB*, 21.9; 6.6; 7.3; 8.10.

⁶³ *EB*, 1.3, 9, 26; 21.9. It is certain that festivals, about which the *Book of the Eparch* speaks only allusively, occurred regularly and were specific to each trade; one in particular was the Feast of the Notaries on 25 October, which included not only a procession, but also entertainment deemed reprehensible by Patriarch Loukas Chrysoberges (1157–70); cf. Balsamon's commentary on Canon 62 of the Council in Trullo, Rhallès and Potlès, *Σύνταγμα*, 2:449–52; see also A. E. Laiou, “The Festival of Agathe: Comments on the Life of Constantinopolitan Women,” in Βυζάντιον: Ἀφιέρωμα στὸν Ἀνδρέα Σπράτον, ed. N. Stratou (Athens, 1986), 1:111–22.

⁶⁴ *EB*, 1.6–11, 20; 2.12.

⁶⁵ For example, bidding up rents, or hiring a competitor's worker while he is still under contract; see below, 404.

that is, for the celebrations that followed.⁶⁶ The chapters regarding the other guilds scarcely permit us to draw so precise a picture. Membership was granted not to paid workers or to the possible proprietors of the premises, but rather to those who used and were responsible for the *ergasteria*. They were enrolled in this capacity in the eparch's register and received his "seal," which granted the right to practice and, at the same time, denoted administrative dependency.⁶⁷ The *Book of the Eparch* envisions the admission of slaves into guilds with the guarantee of their master; it provides so explicitly for goldsmiths, raw silk merchants (the *metaxopratai*), silk garment makers, and soapmakers,⁶⁸ that is, (and the reasoning will become apparent) for noble and lucrative trades. There is one exception: the guild of silk dressers, from which nonfreemen and the poor were excluded in order to avoid the dissipation of raw material and the participation of individuals lacking the social stature and the means sufficient to participate in large-scale business.⁶⁹ The text is silent on the subject with respect to the more humble professions, regarding which the distinction is undoubtedly unimportant. It is difficult to ascertain whether women were admitted to the guilds; legislation prohibited their entry into that of goldsmiths/bankers,⁷⁰ and the *Book of the Eparch* makes passing reference to women only as among the indigent workers involved in the preparation of silk outside any tie to the guilds.⁷¹

While the *Book of the Eparch* enunciates procedures to verify qualification and admission solely with respect to notaries, testimony as to the candidate's integrity or the moral and financial surety of five "honorable persons" or "members of the guild" is required for goldsmiths, money changers, silk cloth merchants, raw silk merchants, silk cloth manufacturers, soapmakers, and swinemongers.⁷² A new member certainly would have paid the guild an entrance fee, but it is explicitly mentioned only for silk cloth merchants, raw silk merchants, and silk cloth manufacturers.⁷³ Soapmakers, more tightly controlled because of the materials they used and bound to specific requirements, were required to pay 6 nomismata to the state and six also to the imperial *vestiarion*, possibly in lieu of, or in addition to, the entry fee.⁷⁴ The presentation to the eparch and his consent were evidently mandatory for the enrollment of a new member and in some cases are specifically mentioned.⁷⁵

It is with respect to the nomination or election of the guilds' leadership that the

⁶⁶ *EB*, 1.1, 3, 13, 14; cf. E. Papagianni, "Byzantine Legislation on Economic Activity Relative to Social Class," *EHB*.

⁶⁷ This "seal" was held to be incompatible, as a matter of principle, with the status of clerics; see below, 418–19.

⁶⁸ *EB*, 2.8–10; 4.2; 6.7; 8.10; 12.9.

⁶⁹ *EB*, 7.5–6.

⁷⁰ *CIC, Dig.* 2.13.12 = *Bas.* 7.18.12.

⁷¹ *EB*, 7.2.

⁷² *EB*, 2.10; 3.1; 4.5; 6.6; 7.3; 8.10; 12.2; 16.1.

⁷³ *EB*, 4.5–6 (6 nomismata); 6.6; 7.3 (2 nomismata); 8.10 (3 nomismata).

⁷⁴ *EB*, 12.2.

⁷⁵ *EB*, 4.6; 7.3; 12.2.

ambiguity of the *Book of the Eparch*—and perhaps of the institutions themselves—is most pronounced. The procedure is described only with respect to the *primikerios*, “promoted” by the eparch following the advice and consent of the notaries, following a hierarchical order that must reflect seniority;⁷⁶ but it is difficult to be certain whether this represents a model or an exception. It is necessary to distinguish in the first instance the *προστάται*, *πρωτοστάται*, or *προστατεύοντες*,⁷⁷ leaders and representatives selected by the members of the guild and undoubtedly approved or confirmed by the eparch, and the *ἐξαρχοι*, prefectural officers assigned to supervise one guild or another, in particular those relating to the silk trade.⁷⁸ It is possible that the guilds that fell under the guardianship of an “exarch” did not have their own representatives: such would seem to be the case for the silk garment merchants, for whom an exarch (who seems to have been paid through *sportulae*) was “designated” by the eparch to distribute the shipments of Syrian imports.

It should come as no surprise that representation would have been more diffuse for merchants dealing in essential goods: fishmongers had several *προστατεύοντες* and tavern keepers had several *προεστῶτες*⁷⁹; neither grocers nor bakers seem to have had formally recognized representatives, and they are spoken of collectively, perhaps because the former had shops scattered throughout Constantinople,⁸⁰ and the latter were not subject to any *liturgia*; the allocation of contributions would thus not have been an issue for the prefecture.⁸¹ Leatherworkers, for precisely the opposite reason, were strictly regulated and the chapter devoted to their trade grants them, exceptionally, a special status by reason of the weight of multiple obligations that they bear: it is the eparch who names their representatives. Saddlers fell under the direct and personal authority of the eparch by virtue of their obligations to the treasury (undoubtedly the supplying of the army) and under the authority of the *protostrator* with respect to their obligations to the emperor (that is, supplies for the palace).⁸²

The City and the Tradespeople

The Economic Role of the Eparch and the Prefecture Between a quasi-freedom of association and a partial dependence on the eparch, there thus existed a wide variety of individual situations, all the more difficult to place in a broad context in that the *Book of the Eparch* gives precious little information regarding the organization of the eparch's office itself. It devotes a brief chapter to a “delegate” (*λεγατάριος*), an individual of no

⁷⁶ *EB*, 1.22. In the event that the notaries judged the candidate to be unfit, the second on the list was chosen.

⁷⁷ *EB*, 11.1; 14.1–2; 16.3; 17.3–4; 21.9.

⁷⁸ *EB*, 5.1, 3; 6.4. See N. Oikonomides, *Les listes de préséance byzantines des IX^e et X^e siècles* (Paris, 1972), 112–13, 321.

⁷⁹ *EB*, 17.1, 3; 19.1.

⁸⁰ *EB*, 13.1.

⁸¹ *EB*, 18.2.

⁸² *EB*, 14.1–2.

doubt some importance, since he was appointed by the emperor upon the nomination of the eparch and was entrusted with regulating the trade activities of foreigners.⁸³ It makes several mentions of a single “assistant” (σύμπανος),⁸⁴ alludes to “exarchs” only, as we have seen, in relation to sellers of Syrian manufactured goods, and notes in passing, with respect to manufacturers of silk stuffs, employees charged with the task of affixing the prefectural seals (βουλλωτής) or with inspecting the quality of the yarn (μυτωτής).⁸⁵ The *Kletorologion* of Philotheos, which predates the *Book of the Eparch* by a dozen or so years, gives a more detailed description in which appear not only the office of the eparch, strictly speaking, in its double policing and economic role, but also the heads of the trades (προστάται), who derived their authority from the eparch and whom court ceremony placed next to prefectural functionaries.⁸⁶ This remains, however, but a rough sketch. John Tzetzes, in the twelfth century, is undoubtedly nearer the mark, when, to show the various constraints and the levies to which fishmongers are subject, he details a long list of prefectural agents who inspect, register, oversee, and demand their cut.⁸⁷

Despite the absence of any systematic account, the *Book of the Eparch* is explicit on the role of the prefecture in the economy. Certain provisions correspond simply to policing and urban administrative functions. (1) The prefecture ensured the application of the prefectural seal on all units and instruments of measure: containers, weights, “Roman” scales, assaying scales;⁸⁸ this quantitative control was also directed at the length and diameter of candles sold by the chandlers.⁸⁹ (2) Other directives seek to prevent fraud in product quality, in unminted gold or silver, candles, soap, and silk fabric, for example.⁹⁰ (3) Either directly or by means of the “money changers,” the prefecture pursued individuals circulating counterfeit or clipped coins, as well as those speculating on monetary exchange (charging higher rates than normal for the changing of a silver *miliaresion*, hoarding and selling bronze *noummia* at profit), or those refusing to accept the *nomisma tetarteron*, and the “two quarters” that bore the stamp of authenticity.⁹¹ (4) The prefecture used the guilds to watch over the provenance of precious objects or livestock offered for sale and to check the theft of goods or their resale.⁹² (5) With respect to retail sales of beverages, it set the hours of opening and

⁸³ *EB*, 20.1–3. The title does not appear in the *Kletorologion* of Philotheos, which may indicate that it was created between 899 and 912.

⁸⁴ *EB*, 14.2; 18.1, 4; 19.1. In chapter 14.2, καὶ ἐν ἐνὶ συντελοῦσι τῷ συμπόνῳ may indicate that the pelters and the tanners “collectively fall under the jurisdiction of the assessor” and not that they “share the same assessor” (emphasis added). In the *Kletorologion* of Philotheos, the σύμπανος is certainly a single functionary (see below, note 93).

⁸⁵ *EB*, 8.3.

⁸⁶ Oikonomides, *Listes*, 113, commentary at pp. 319–21.

⁸⁷ *Ioannis Tzetzae Epistulae*, ed. P. A. M. Leone (Leipzig, 1972), ep. 57, pp. 81–82 (hereafter Tzetzes): ἐπόπται, ἐπιτηρηταί πρωτοκαγκελλάριοι, μανδάτορες, δομέστικοι, etc.

⁸⁸ *EB*, 6.4; 10.5; 11.9; 12.9; 13.2, 5; 16.6; 19.4.

⁸⁹ *EB*, 11.6.

⁹⁰ *EB*, 2.5; 8.3; 11.4; 12.4–5, 8.

⁹¹ *EB*, 3.1, 3, 5; 3.3; 9.5; 10.4; 11.9.

⁹² *EB*, 2.6–7; 21.3.

closing.⁹³ (6) Finally, the prefecture arbitrated disagreements that the guilds found themselves unable to resolve⁹⁴ and implemented basic rules to discourage unfair competition: hiring a laborer working for a colleague prior to the end of the month for which he has already been paid by the latter;⁹⁵ bidding up the rent of a competitor whom one would see evicted in order to obtain the location,⁹⁶ and disregard for commitments made under an agreement.⁹⁷ The tacking-on to the *Book of the Eparch* of a concluding and somewhat extraneous chapter concerning the building trades can be attributed to the fact that this sector was wracked by a particularly large number of disagreements regarding, we are told, the competence of the workers, guarantees as to the stability of construction, the payment of deposits on the conclusion of an agreement, possible delays in supplying a work site with materials or the abandonment of the work site by specialized artisans, and the revision of an initial estimate.⁹⁸ Nonetheless, the stated rules do not, by a wide margin, cover or explicate the totality of normal practices. Thus on several occasions the *Book of the Eparch* mentions deposits or partial payments made by the purchaser at the time an order is placed, or at the conclusion of a negotiation, but it is a letter of Ignatios the Deacon (in the first half of the 9th century) that details the conventional rate: 25% of the total price.⁹⁹

The corporative organization allowed the city eparch to impose a number of obligations (or cash redemption thereof), without having to concern himself with their apportionment, which would have been ensured by the man responsible for each guild; on this issue as well, however, the *Book of the Eparch* is far from exhaustive, alluding only briefly to a requisitioning of the saddlers on behalf of the court or the army,¹⁰⁰ to the obligation that devolved on horse dealers to maintain a sewer,¹⁰¹ to public offices entrusted on occasion to money changers,¹⁰² and to mandatory attendance at imperial ceremonies, a requirement that applied to notaries in particular, but which we know held true for nearly all the guild representatives.¹⁰³ Thanks to other texts, we can suppose that the list of required services was much more extensive (guard duty at the ramparts of the city;¹⁰⁴ providing equipment, horses, or money for the military campaigns; lighting, cleaning, and decorating the city or the palace).

⁹³ *EB*, 19.3.

⁹⁴ *EB*, 1.10–11.

⁹⁵ *EB*, 6.3; 8.10.

⁹⁶ *EB*, 4.9; 9.4; 10.3; 11.7; 13.6; 18.5; 19.2.

⁹⁷ *EB*, 18.5.

⁹⁸ *EB*, 23.1–4.

⁹⁹ *EB*, 6.11; 9.2; 10.5; 11.5; 23.1; see A. P. Kazhdan, "Ignatios the Deacon's Letters on the Byzantine Economy," *BSI* 53 (1992): 197–201.

¹⁰⁰ *EB*, 14.1.

¹⁰¹ *EB*, 21.9; the meaning is uncertain.

¹⁰² *EB*, 3.6.

¹⁰³ *EB*, 1.4.

¹⁰⁴ When the emperor went on campaign, he tallied the number of men remaining to defend the city—soldiers of the *tagmata*, organized groups answerable to the eparch (among them, the members of the guilds)—and made certain that each of these groups knew its precise post on the ramparts: ἐν ποίῳ μέρει ἕκαστον τούτων τῶν συστημάτων φυλάξει τὴν πόλιν ἐν καιρῷ ἐπιδημίας ἐχθρῶν; J. F. Haldon, *Constantine Porphyrogenitus, Three Treatises on Imperial Military Expeditions* (Vienna, 1990), 86–87, 162;

Ensuring the most regular provisioning possible and avoiding excessive price fluctuations were always elements of the role assigned to the officials of large cities, where shortages could easily provoke riots, and where the eparch served as a shield to deflect malcontents from taking their demands to the emperor himself. The *Book of the Eparch* reflects this tradition in prohibiting various merchants from stockpiling products in order to sell them more dearly in times of shortage.¹⁰⁵ Hoarding and speculation were severely punished, and the prices of products that were sensitive to fluctuations (bread, fish, meat, wine) were established by consultation between the guilds and the prefecture.¹⁰⁶

The rules applicable to large-scale commerce are the subject of another chapter.¹⁰⁷ Mention should be made here, however, of the careful supervision carried out by the prefecture (and, in particular, of the “delegate” appointed for this purpose) over foreigners who had come to Constantinople to engage in commerce, the disposition of their merchandise, and its control of certain valued luxury products whose export was prohibited. Most of these limitations, moreover, targeted not only Bulgarians, Arabs, or other foreigners, but also non-Constantinopolitans, to such an extent that Constantinople, from an economic perspective, seems less the capital of an empire than an imperial city operating under a special status.

Beyond these activities of control—all of them quite ordinary—there emerge several principles that define an economic policy: first of all, the concern to distinguish to the extent possible between producers and sellers, to prohibit the simultaneous exercise of more than one trade and membership in two different guilds,¹⁰⁸ and to check the growth of multifunctional businesses. A precept of Callistratus, repeated in the *Digest* and in the *Basilics*, had already sought to discourage fishermen and peasants from bringing their products to town in order to sell them there themselves.¹⁰⁹ The *Book of the Eparch* follows the same intent in explicitly or implicitly condemning itinerant sales or illicit street peddling (the existence of which is nonetheless amply attested; see Fig. 5),¹¹⁰ in requiring artisans-shopkeepers to exercise their trade in suitable locations rather than in their place of residence, and in grouping trades to the extent possible

idem, *Byzantine Praetorians: An Administrative, Institutional and Social Survey of the Opsikion and Tagmata* (Bonn, 1984), 256–75, esp. 258–59, 266–70. In this text, the *συστήματα* may designate not only the guilds but also, under a common meaning, all organized groups.

¹⁰⁵ *EB*, 10.2; 11.3; 13.4; 16.5; 20.3.

¹⁰⁶ *EB*, 15.1–2; 17.1, 4; 18.1, 4; 19.1. Regarding the terms and conditions, see below, 447, 448–49, 451.

¹⁰⁷ See, Laiou, “Exchange and Trade,” 723ff.

¹⁰⁸ *EB*, 4.7; 5.1; 8.6; 10.1, 6; 11.2; 21.7. On this issue, see B. Malich, “Wer Handwerker ist, soll nicht Kaufmann sein—ein Grundsatz des byzantinischen Wirtschaftsleben im 8/9 Jahrhundert,” in *Studien zum 8. und 9. Jahrhundert in Byzanz*, ed. H. Köpstein and F. Winkelmann (Berlin, 1983), 47–59.

¹⁰⁹ *CIC*, *Dig.* 50.11.2 = *Bas.* 53.6, 7. Callistratus is referring to Plato.

¹¹⁰ See in particular *EB*, 2.2, 6 (money changers); 11.1 (chandlers); 21.3 (horse traders). Itinerant selling was a common practice with respect to food products (fish, fresh vegetables, fruits, clotted milk), as well as inexpensive manufactured goods: cf. *Poèmes prodromiques en grec vulgaire*, ed. D. C. Hesselring and H. Pernot (Amsterdam, 1910), 77–78 (IV, lines 93–96, 109–13, 121–29); Tzetzes, ep. 57, p. 81 (lines 16–30); cf. Ph. Koukoules, *Βυζαντινὸν βίος καὶ πολιτισμός*, vol. 2.1 (Athens, 1948), 239–41; idem, *Θεσσαλονίκης Εὐσταθίου Τὰ Λαογραφικά* (Athens, 1950), 1:400–402.

in specialized streets or quarters, which have left their mark on the place names of Thessalonike as well as Constantinople. Thus a true urban economy is outlined: the state's function was less to control than to ensure a level of specialization and qualification, which was hardly compatible with the common practice of small-scale regional trade. To combat this tendency toward disintegration, the *Book of the Eparch* very clearly expresses a desire that sales not be conducted immoderately on a retail basis (κατακερματίζεσθαι) and provides for the collective purchase of certain consignments by the members of the guilds, with redistribution proportional to the respective level of investment,¹¹¹ thus avoiding competing encumbrances—under this system, direct sale and the proliferation of intermediaries, on the one hand, and, on the other, an excessive fragmentation of trade. It was hoped that the shopkeepers would have had sufficient funds to participate in large transactions, but it was intended that they retain their solidarity and that the wealthiest of them not band together to form a great financial power.

Underlying the policing and control functions with which the prefecture was vested, it is thus likely that there existed a concern not so much to “plan” the urban economy as to maintain it at a high level and ensure the survival of a class of merchants and specialized artisans threatened by the excessive dispersal of production and commercialization, the existence of parallel networks, and the power of money handlers.

The Political and Social Importance of “Trades” During the ninth and tenth centuries, in seeking to give the impression that the entire capital or the whole empire is participating in a particular event or a ceremony, the chroniclers rarely fail to name—together with the *archontes* and dignitaries or “senators” (ἄρχοντες, συγκλητικοί)—the citizens, the “demotes,” and the artisans-merchants (πολίται, δημόται, ἐργαστηριακοί).¹¹² These represent the people of the city from three principle perspectives: the citizenry as a whole, the factions, and the “trades,” all coexisting under a peaceable complementarity. Thereafter, social representation changes completely, and the sources that describe the riots of the eleventh to twelfth century note the rise in power of a social category ambiguously designated as οἱ ἀγοραῖοι.¹¹³ One can perceive in this expression a contempt from on high for “street people”—the manual workers and the small tradesmen, characterized, as were the “demotes” in other times, as agitators.¹¹⁴ It is not a matter solely of the *ergasteriakoi* registered in the guilds, but also of their laborers,

¹¹¹ *EB*, 5.2; 6.8; 7.5; 9.1, 3, 6; 16.3; 17.3; 18.3.

¹¹² See the sources cited above, 397–99; with respect to ceremonial occasions, cf. *De cerimoniis aulae byzantinae*, ed. J. J. Reiske, 2 vols. (Bonn, 1829–30), 1:1; 2:15, 21 (pp. 11–14, 579); see also the triumphal procession of Justinian in 559, Haldon, *Three Treatises*, 140–41.

¹¹³ Other designations are τὸ ἀγοραῖον, πᾶν τὸ τῆς ἀγορᾶς, ὅσον δημῶδες καὶ ἀγοραῖον, and ὅσοι τῆς ἀγορᾶς τύρβης καὶ τῶν βαναύσων; Michel Psellos, *Chronographie*, ed. E. Renauld, 2 vols. (Paris, 1926–28), 1:96, 102–16; 2:83; *Michaelis Attaliothae Historia*, ed. I. Bekker (Bonn, 1853), 12–13, 70–71, 270 (hereafter Attaleiates); *Ioannis Scylitzae Synopsis historiarum*, ed. I. Thurn (Berlin–New York, 1973), 498 (hereafter Skylitzes).

¹¹⁴ See the analyses of S. Vryonis, Jr., “Byzantine Δημοκρατία and the Guilds in the Eleventh Century,” *DOP* 17 (1959): 289–314.

and thus of a world of diverse and organized labor, recognized as having leaders, and in which Kekaumenos suggests keeping spies to discover what is afoot in the city.¹¹⁵ Just as Prokopios in the sixth century held the “colors” of the hippodrome responsible for the divisions in the empire, so too Niketas Choniates, at the end of the twelfth century, blames the diversity of trades and the existence of quarters differentiated by ethnicity for the fickleness of public opinion and the unpredictability of political reactions in Constantinople.¹¹⁶ At a distance of six centuries, the same language applies to two radically different realities.

While the title of “senator” had long since ceased to confer real political power, the opening of the senate to tradesmen in the second half of the eleventh century simultaneously reflected an urban economy undergoing a strong expansion, the demand of tradesmen and artisans who sought to add social privileges to the advantages of wealth, and an imperial policy anxious, until the accession of the Komnenoi, to gain the support of a new social class, as distant from the “little people” or the shopkeepers of the “agora” as it was from the landed aristocracy.¹¹⁷ If one is to believe Psellos, this new policy was, if not put into play, then at least systematized by Constantine IX Monomachos (1042–55), accused of upsetting the social equilibrium by opening the senate to “nearly all the people of the market and vagabonds,” and subsequently followed by Constantine X Doukas (1059–67), who is said to have dismantled the divide that separated senators from ordinary citizens by admitting to the senate “all sorts of manual laborers.”¹¹⁸ Looking beyond the hyperbole, we can see that it was an élite of merchants or representatives of the trades that received the title of senator, perhaps at a lower rank, since they did not receive silver crosses or silk cloth in conjunction with certain official ceremonies, as did senators of high birth.¹¹⁹ A little later, under Michael VII Doukas (1071–78) and subsequently Nikephoros III Botaneiates (1078–81), the dignities and the concomitant senatorial title may have been bestowed by skipping over intermediate ranks. Thus the number of senators is said to have grown to “myriads” and titles to have been devalued at the same pace as the currency.¹²⁰

The advent of the Komnenian emperors may have marked a turning point. In any

¹¹⁵ Ed. Wassiliewsky and Jernstedt, 5 (§ 10), and ed. Litavrin, 124 (§ 3) (as above, note 10). He may be describing the guilds, although the expression σύστημα could apply to any group or association, and in particular, in the early period, to the *curiae* of the cities (CI 10.19.9; John Lydos, *De magistratibus*, ed. A. C. Bandy [Philadelphia, 1983], 3.46 [p. 204]).

¹¹⁶ Choniates, 233–34 (concerning the riot of 1171).

¹¹⁷ P. Lemerle, *Cinq études sur le XI^e siècle byzantin* (Paris, 1977), 287–93, 309–10; Hendy, *Studies*, 570–80.

¹¹⁸ Psellos, *Chronographie*, 2:132, 145. Psellos also declares in his funeral oration on John VIII Xiphilinos (K. N. Sathas, *Μεσαιωνικὴ Βιβλιοθήκη*, 7 vols. [Venice, 1872–94; repr. Hildesheim, 1972], 4:430–31) (hereafter Sathas, *MB*) that Constantine Doukas felt that there was no need to consider birth alone, nor to recruit senators solely from senatorial families, since doing so might have limited membership in the Senate to imbeciles.

¹¹⁹ They are termed ἄστυνοί and ἄβλαπτοί: see Lemerle, *Cinq études*, 290.

¹²⁰ Attaleiates, 275; *Constantini Manassis Breviarium historiae metricum*, ed. I. Bekker (Bonn, 1837), 285; *Nicephori Bryennii Historiarum libri quattuor*, ed. P. Gautier (Brussels, 1975), 4:1 (pp. 256–59) (hereafter Bryennios).

event, a novel of Alexios I, the date of which is uncertain, settles restrictively a specific case with broad application, putting into question the status of merchants who have become senators: the emperor limits the right to swear an oath at their place of residence (rather than before the tribunal) to senators “who are not enrolled in a guild subject to the eparch and who have preserved the grandeur of their dignity,” as distinguished from *συστηματικοί* and those who, attracted by the lure of profits, have chosen to engage in commerce.¹²¹ It would be an exaggeration to seek the expression of a new policy in this particular response of Alexios Komnenos; more plausibly, it is the atavistic response of an aristocrat who gives pride of place to birth over wealth and distinguishes between the revenues of a landed aristocracy, on the one hand, and commercial profit on the other. The emperor may also have been shocked, as were the historians of the period, by a muddling of customary social criteria, which had always distinguished rank that attached to office and dignities attendant on the emperor from the position of clerics and monks (subject to the church’s supervision) and the position of tradespeople (subject to the eparch’s). Access to the senate by guild members, or, more specifically, the pursuit of a trade by a “tradesman” turned senator, was seen as the transgression of social order.

What may we then conclude regarding the social rank of artisans and merchants? First of all, it is essential to avoid confusing social rank with the scale of social values. The often-cited episode of Emperor Theophilos burning the merchant vessel of his wife, Empress Theodora, and reproaching her with having turned him into a *naukleros* when God had made him an emperor, signifies only that what was appropriate for a private individual was not appropriate for the holder of the *basileia*.¹²² It would be stretching to draw from this episode the idea that Byzantium held commerce in contempt. While, by tradition, commerce and artisanal activity continued to rank low in the social hierarchy,¹²³ it is nonetheless essential to note the important position of artisans-merchants throughout the hagiography of the seventh century,¹²⁴ in the letters of Theodore of Stoudios and even of some of his correspondents,¹²⁵ in the Lives of

¹²¹ Zepos, *Jus*, 1:645–46; F. Dölger, *Regesten der Kaiserurkunden des oströmischen Reiches*, vol. 1.2 *Regesten von 1025–1204* (Munich, 1925), no. 1091; Lemerle, *Cinq études*, 291–92: a merchant’s wife was involved in a lawsuit against her uncles—also merchants—who, arguing the privilege of their senatorial dignity, refused to come to the tribunal of the city eparch to swear an oath. Cf. Laiou, “Exchange and Trade,” 753–54, and Papagianni, “Byzantine Legislation.”

¹²² *Theophanes Continuatus*, ed. I. Bekker (Bonn, 1838), 88–89; *Iosephi Genesisii, Regum libri quattuor*, ed. L. Lesmüller-Werner and I. Thurn (Berlin, 1978), 53; *Ioannis Zonarae Epitome historiarum*, ed. M. Pinder and T. Büttner-Wobst, 3 vols. (Bonn, 1841–97), 3:357–58.

¹²³ See the analyses of A. Giardina, “Modi di scambio e valori sociali nel mondo bizantino (IV–XII secolo),” in *Mercati e mercanti nell’alto medioevo: L’area euroasiatica e l’area mediterranea* (Spoleto, 1993), 523–84, esp. 530–36. Cf. Laiou, “Exchange and Trade,” 752–54.

¹²⁴ Leonтий of Neapolis, *Vie de Jean de Chypre*, ed. A.-J. Festugière (Paris, 1974), § 14 (taverners or shopkeepers), § 40 (a money changer), § 51 (shoemakers), (pp. 362–63, 392, 401–2), *Miracles of St. Artemios*, ed. A. Papadopoulos-Kerameus, *Varia Graeca Sacra* (St. Petersburg, 1909; repr. Leipzig, 1975; and New York, 1997), miracles 21 (a chandler), 25 (a butcher), 26 (a blacksmith), (pp. 25–28, 35–39).

¹²⁵ *Theodori Studitae Epistulae*, ed. G. Fatouros, 2 vols. (Berlin, 1992), eps. 93 (a chandler), 94 (a perfumer), 260 and 261 (two linen merchants), (2:213–15, 389–90) (hereafter Theodore of Stoudios).

Basil the Younger and Andrew the Fool in the tenth century,¹²⁶ and in the satirical or historical literature of the twelfth century. While cities recognized that their wealth depended on the skill of their tradespeople, artisans and merchants were forever subject to conflicting judgments: if poor, they were held up as examples of humility; if rich, they were tagged, following the age-old Roman tradition, as ludicrous or brazen upstarts.¹²⁷

In fact, we are not dealing with a homogeneous social category. The members of the “guilds” comprised only a narrow layer of merchants; they did not in themselves come close to representing the entirety of the urban economy. Not only was there a world of highly diversified labor that participated in this economy, but also an aristocracy that knew how to make its capital—or its influence—yield profits. What characterizes the eleventh and twelfth centuries was the growing difference between small street merchants (they were quick to riot, we are told) and the powerful merchants and financiers such as Kalomodios, who treated the *archontes* as equals, or the money changers and merchants of manufactured goods who had themselves granted the dignity of *sebastos* during the reign of Alexios III Angelos.¹²⁸ Conjoining them in the category of ἀγοραῖοι was merely a device of literary polemic. Impoverished writers such as John Tzetzes and Theodore Prodromos were simultaneously contemptuous of the little shopkeepers and dazzled by the higher-level artisans, whose technical mastery inspired their admiration and whose social success excited their envy.¹²⁹

Beyond Constantinople, Post-Tenth Century In the absence of explicit sources, it is difficult to substantiate the existence of a system of guilds outside Constantinople, at least in fairly sizable towns or to prove that the system continued past the eleventh century, during the period in which the opening of the markets rang the death-knell of any and all state “direction” of the economy. We have only clues, which nonetheless tend to accord with one another. When travelers such as Benjamin of Tudela and al-Idrisi note the existence of significant artisanal presence in a city, one should not necessarily draw the conclusion that an organized guild is at issue; this, however, seems almost certain with respect to towns for which we have prefectural seals, such as Thessalonike and possibly Nicaea in the eighth or ninth century,¹³⁰ or for those cities in which the state assigned corvées or dues according to profession. When the *De administrando impe-*

¹²⁶ For the Life of St. Basil the Younger, see below, note 147.

¹²⁷ See Giardina, “Modi di scambio,” 579–84.

¹²⁸ Choniates, 483–84, 523–24. See also the individual named Mavrix in Bryennios, 197. This progressive social differentiation might account for the *Peira* (51.7 = Zepos, *Jus*, vol. 4) distinguishing, in the 11th century, between *σωματεία* and *συστήματα*, a distinction that would not have made sense in the 10th century; see Laiou, “The Festival,” 117.

¹²⁹ *Poèmes prodromiques*, 73–79, 82–83 (IV, lines 1–142, 227–57); John Tzetzes seems to have obtained a promise of revenues (perhaps a fiscal transfer) from three perfume shops: Tzetzes, ep. 83, lines 124–25 (a partially corrupt text). See P. Magdalino, “Byzantine Snobbery,” in *The Byzantine Aristocracy, IX to XIII Century*, ed. M. Angold (Oxford, 1984), 57–78, esp. 66–68.

¹³⁰ G. Zacos and A. Vegliery, *Byzantine Lead Seals*, 2 vols. in 6 fasc. (Basel, 1972), 1.1: no. 957 (Thessalonike); 1.2: no. 1436 (Thessalonike); 1.3: no. 3156 (Nicaea; the interpretation of this seal is somewhat uncertain).

rio exempts sailors and the Peloponnesian murex harvesters from providing the tribute of a horse, it intimates that the system of guilds functioned as a type of fiscal “wheel-works” under Constantine VII, in the provinces as it did in Constantinople.¹³¹ At a later point, the Theban manufacturers of purple fabric were required to provide a specific quantity of cloth, which suggests that they were organized as a professional association.¹³² Michael Choniates complains of the insufficiency of the contributions paid by the *συστήματα* of Athens,¹³³ which suggests that the *ergasteria* of that city funded the budget of the metropolitan church, just as the *ergasteria* of Constantinople funded the coffers of Hagia Sophia, through a system of tax devolution.

State pressure was not prerequisite, moreover, to the association of trades into guilds. In an act of sale drafted in 1097 by a priest of Hagia Sophia in Thessalonike, Michael Kazikes, “*primikerios* of the notaries,” two furriers, and the head of the hatmakers’ guild (πρώτος τῶν καμηλαυκάδων) appear as witnesses.¹³⁴ At the close of the eleventh century, when Thessalonike no longer seems to have had an eparch, a trade organization remained in existence, not reflecting control imposed by the state, but rather a social logic and, as in Constantinople, a division into specialized city quarters.

The theory that guilds “disappeared” when, beginning with the reign of Alexios I Komnenos, the trade concessions granted to Italian merchants guaranteed “freedom” of trade, while the “feudalization” of the economy granted the control of artisanal industries to the landed aristocracy, rests on a preconception and implicitly defines the guilds of the East as a simple means of state control, as distinct from the “free” guilds of the West. In fact, the eastern guilds undoubtedly continued to exist where the level of exchange and demography made them useful, without altering their nature; of their two functions, however—social and economic on the one hand, state controlled and fiscal on the other—they retained only the first.¹³⁵

Workers, Slaves, and “The Powerful”

The artisans or merchants who were registered with the prefecture in a specific trade were operators of an *ergasterion*, answerable to the eparch and the fisc; they were expected to be honest and, especially, to have sufficient means to maintain production and exchange at a high level. Undoubtedly they formed a cohesive social group, but this did not by any means include all who participated in economic activity. Laborers

¹³¹ *De administrando imperio*, ed. G. Moravcsik and R. J. H. Jenkins (London-Washington, D.C., 1962–67), 1:257, chap. 52 (line 11) (hereafter *DAI*); see Schreiner, “Organisation,” 51–52.

¹³² D. Jacoby, “Silk in Western Byzantium before the Fourth Crusade,” *BZ* 84/85 (1991–92): 481, 492.

¹³³ Μιχαήλ Ἀκομινάτου τοῦ Χωνιάτου τὰ σοφζόμενα, ed. Sp. Lambros (Athens, 1880), 2:54 (lines 14–15), 275 (lines 9–14).

¹³⁴ *Actes de Lavra*, ed. P. Lemerle, A. Guillou, N. Svoronos, and D. Papachryssanthou, *Archives de l’Athos*, 4 vols. (Paris, 1970–82), 1: no. 53 (lines 37–40).

¹³⁵ For a discussion of the argument of E. Francès, “L’état et les métiers,” see N. Oikonomides, *Hommes d’affaires grecs et latins à Constantinople, XIIIe–XVe siècles* (Montreal, 1979), 108–15; L. Maksimović, “Charakter der sozial-wirtschaftlichen Struktur der spätbyzantinischen Stadt 13.–15. Jhd.,” *JÖB* 31.1 (1981): 162–64.

worked under their orders, and they themselves depended upon proprietors, financial backers, or patrons. One example reveals how a vertical chain of dependency supplemented the horizontal solidarity of the guild. Jacob, the hero of an embroidered but by no means imaginary account written around 640, is a young Jew from Ptolemais, who has come up to Constantinople.¹³⁶ Having led the life of a wastrel for several years, he settles down, entering into the service of a wealthy man, plausibly a merchant. Jacob initially lodges with him, and subsequently rents quarters and acts as his agent. A bit later, this rich “patron” entrusts him with a small sum of money on which he is expected to generate a return, undoubtedly by opening a shop. Finally, certain of his honesty, the benefactor entrusts Jacob with garments valued at 2 pounds of gold (silk garments, one would suppose) to sell illicitly in Carthage by going door to door, with a salary of 15 nomismata per year, which roughly corresponds to 10% of the sum invested in this shady operation, from which a high profit is expected. Jacob is discovered to be an unbaptized Jew and imprisoned. To extricate him from these difficulties, Jacob’s Constantinopolitan patron (προστάτης) calls on his own “protector,” a *koubikoularios* of the imperial palace, who sends a ship to repatriate Jacob, and the money, on 13 July 634. The three players in this story occupy three different social levels: Jacob is an employee entrusted with increasing responsibility; his “boss” and patron is, if not a merchant, then at least an individual who engages in commerce and who, in order to enrich himself more quickly, seems somewhat prone to avoid corporative and legal constraints; however, in this three-level society, wealth is not enough, and the patron himself needs a powerful “protector,” who in this context is undoubtedly not a financial backer, but rather a man of power, who capitalizes on his influence.

Free and Unfree Employees The *ergasteriakoi* employed, under contract, individuals with differing levels of skill. Male and female workers were numerous in the textile trades, as suggested by Psellos’ description of a eleventh-century *panegyris*, not strictly speaking a guild celebration, but rather a kind of kermess—semiprofane, semireligious—that brought together the women who worked at carding, weaving, and the manufacture of garments.¹³⁷ Goldsmiths, by contrast, employed only one or two apprentices, who would help them for the time that it took to learn the trade; St. Anastasios, in the seventh century, having deserted the Persian army, enlists as apprentice with a goldsmith of Hierapolis in Syria/Mabbug, and then with another in Jerusalem.¹³⁸ In the Life of Theodore the Martyr, we come across a shop in which two goldsmiths work, one with the rank of “master” (διδάσκαλος), the other with that of “apprentice” or “employee” (μαθητής, μίσθιος).¹³⁹ The apprenticeship function, moreover, appears clearly in the *Book of the Eparch*,¹⁴⁰ which alludes to it while seeking at the same time to limit the

¹³⁶ *Doctrina Jacobi*, 5.20 (pp. 214–19, 237–40).

¹³⁷ Sathas, *MB*, 5:532–43; see the interpretation of Laiou, “The Festival.”

¹³⁸ Flusin, *Saint Anastase le Perse*, 1:48–51 (*Actes anciens*, 8, 10); 310–13 (*Passion métaphrasée*, 3).

¹³⁹ *AASS*, Nov. 4:62–63 (chap. 13).

¹⁴⁰ *EB*, 11.1; 12.1.

number and the role of assistants or specialized workers onto whom the members of the guilds might pass their obligations and whom they might use as itinerant sellers. Notaries were allowed only one scribe, whom they would present to the eparch and who would have been compensated in proportion to the fees of his master; scribes did not have the right to draft the legal formulas of the acts that they recorded.¹⁴¹ Money changers were entitled to two employees, bonded by them, to tally the coins on the counter, but they could neither send “their own people” into the street, nor entrust them with the accounting books, nor take leave and delegate the responsibility for the “bank” to them.¹⁴² The same regulation limits the duration of a contract between a worker and his employer to one month, with advance payment, a provision that undoubtedly reflects less a certain precariousness of employment and more a scrappy competition among the managers of the *ergasteria* for able workers.¹⁴³

It may have been to avoid an excessive mobility that the *ergasteriakoi* employed personnel or workers who were not freemen and were thus completely dependent, whom they could train and keep. A number of studies have examined the persistence of slavery and even its renewed importance in the ninth and tenth centuries,¹⁴⁴ coinciding with the urban revival and the military successes of Byzantium. It is essential to note that the East did not follow the western model of cities whose “air” made men “free” and of craftsmen who were skilled, competitive, and organized into western-type “guilds” that would not sustain the poor profit-earning capacity of dependent labor.¹⁴⁵ Slavery is essentially an urban phenomenon, but it may not (or may no longer) be seen as the driving element of a “slave system of production.”

A number of different cases should be noted. Most of the slaves of wealthy artisans, like those of wealthy aristocrats, belonged to the household and were not involved directly in production or sale. The Life of St. John the Almsgiver, at the beginning of the seventh century, recounts the story of the customs official Peter of Alexandria, who had himself sold at a low price as a kitchen slave to a goldsmith from Jerusalem with many servants.¹⁴⁶ Basil the Younger busies himself in healing a good number of domestic slaves, among them one Theodore, styled “head slave” (πρωτεύων), envied by his “companions in slavery” (σύνδουλοι) because he has gained the trust of his master, a rich, blind *ergasteriakos* who resides in the quarter of Sophianai.¹⁴⁷ There is another

¹⁴¹ *EB*, 1.17, 18, 24.

¹⁴² *EB*, 3.4, 6; see also 11.1; 12.4.

¹⁴³ *EB*, 6.2, 3; 8.10, 12: workers were under contract for a period of time corresponding to the salary received.

¹⁴⁴ Kazhdan, “Tsekhi”; R. Browning, “Rabstvo v vizantiiskoi imperii (600–1200),” *VizVrem* 14 (1958): 38–55; A. Hadjinicolaou-Marava, *Recherches sur la vie des esclaves dans le monde byzantin* (Athens, 1950), 46–47 (concerning the slaves in the *Book of the Prefect*); H. Köpstein, *Zur Sklaverei im ausgehenden Byzanz* (Berlin, 1966), esp. 103ff; eadem, “Sklaven in der Peira,” in L. Burgmann ed., *FM* 9 (1993): 1–33, which notes that approximately 10% of the cases adjudicated by the judge Eustathios Rhomaios (ca. 970–1045) concern slaves, but that no mention is made of whether their work is artisanal or commercial.

¹⁴⁵ See in particular, Weber, *General Economic History*, 145ff.

¹⁴⁶ *Vie de Jean de Chypre*, chap. 21 (pp. 369–72).

¹⁴⁷ Life of St. Basil the Younger, ed. A. N. Veselovskii, “Razyskaniia v oblasti russkogo duchovnogo stikha,” *Sbornik Otdeleniia russkogo iazyka i slovesnosti Imperatorskoi Akademii nauk* 46 (1889–90) suppl.:

category as well: slaves forced by their masters to work in their shop or workshop on the same terms as free employees. Their price varied according to their intellectual and technical skills: skilled slaves (physicians, secretaries or “notaries,” bookkeepers, specialists in goldwork, weaving, or manufacture) sold at approximately ten times the price of unskilled slaves; in the twelfth century, according to Balsamon, the price might reach, but never exceed, 72 nomismata, or 1 pound of gold.¹⁴⁸ But the *Book of the Eparch* discloses yet another category: slaves enrolled in a trade through a corporation, that is, those who, with the authorization and guarantee of their masters, held official responsibility for an *ergasterion* and were enrolled in this capacity in the corresponding corporation. This was, as we have seen, explicitly allowed in certain trades,¹⁴⁹ and prohibited only with respect to the dressing of raw silk, but for economic rather than social reasons.¹⁵⁰ The prohibition on money changers putting their slaves in their place at their benches sought to prevent the dispersion of responsibility and not, perhaps, the slaves’ access to the profession.¹⁵¹

To judge by these texts, there was thus a fundamental difference between the slaves employed by the *ergasteriakoi* in an economic capacity and those of the rich or “powerful” who were set up as *ergasteriakoi* by their masters and entrusted with capital on which they were expected to generate a return. In the Life of St. John the Almsgiver, the customs official Peter gives 10 pounds of gold to one of his slaves, described as a “notary”—that is, a secretary—to purchase a business in Jerusalem.¹⁵² In this case, the gesture is charitable, but it was most often motivated by self-interest, consisting of a financial investment made all the more secure in that the individual to whom the sum was entrusted was completely dependent. The provisions of the *Book of the Eparch* find an unexpected parallel in a commentary of Zonaras, a twelfth-century canonist, who observes that a slave can be the *majordomo* of his master’s home (that is, the head of his household), or that he can be appointed by his master to head an *ergasterion*, or even have a sum of money entrusted to him by his master to engage in commerce.¹⁵³ It is worth noting that these are the same three circumstances in which the Jacob of the *Doctrina* successively finds himself: first a servant, then associated with a trade, and finally given a sum of money that he is expected to make grow; the difference is that Jacob is free, while the slave is not. Jacob’s patron necessarily has to place trust in him, whereas the master holds the reins of the slave whom he commands.

51–54; see also 54–55: a slave (οικέτης) belonging to another *ergasteriakos* is healed of dropsy; cf. C. Angelidi, “Δοῦλοι στὴν Κωνσταντινούπολη τὸν 10ο Αἰ. Ἡ μαρτυρία τοῦ ὁσίου Βασιλείου τοῦ Νέου,” Σύμμεκτα 6 (1985): 33–51.

¹⁴⁸ Commentary on Canon 85 of the Council in Trullo: Rhallès and Potlès, *Σύνταγμα* 2:500; for the price of slaves, see the statistics gathered in *Hommes et richesses*, 1:351–53.

¹⁴⁹ *EB*, 2.8–9; 4.2; 6.7; 8.3.

¹⁵⁰ *EB*, 7.5 (for fear of an excessive segmentation of purchases).

¹⁵¹ *EB*, 3.1.

¹⁵² *Vie de Jean de Chypre*, chap. 21 (p. 370).

¹⁵³ Commentary on Canon 82 of the Holy Apostles, which prohibits conferring orders on a slave without the consent of his master: Rhallès and Potlès, *Σύνταγμα*, 2:106, cited in E. Papagianni, “Τὸ πρόβλημα τῶν δούλων στὸ ἔργο τῶν κανονολόγων τοῦ 12ου αἰῶνα,” in *Τὸ Βυζάντιο κατὰ τὸν 12ο αἰῶνα: Κανονικὸ δίκαιο, κράτος καὶ κοινωνία*, ed. N. Oikonomides (Athens, 1991), 411–12.

The “Archontes” The artisan-merchant was rarely his own master. Most often, he depended more or less closely on a richer or more powerful individual, who might simply be the proprietor, his financial backer, or even his “protector” in a society that remained quite Roman and in which influence (*patrocinium*, προστασία) counted as much as money. It appears that an *ergasteriakos* in Constantinople rarely owned his own business. The *Book of the Eparch* never alludes to this possibility (with one possible exception),¹⁵⁴ whereas it makes frequent reference to rents paid by operators and to a practice, condemned as abusive and severely punished, that consisted in an *ergasteriakos* causing the rent of a competitor to be raised in order to take over the other’s premises.¹⁵⁵ The fisc itself gained profit from the public locations that it leased for commercial purposes (covered markets, hostelries, simple stalls situated between the columns of covered porticoes, sites in the marketplace); Benjamin of Tudela claims knowledge that the state derived a significant portion of its revenues from such practices.¹⁵⁶ The church was not idle either, and we see the church of Alexandria in the seventh century assigning a special “supervisor” with the task of making the rounds of the taverns (or possibly the grocers’ shops) that it owns in order to collect the rents.¹⁵⁷ The landed property of pious or charitable institutions, as well as that of dignitaries or leading citizens, often included retail shops or workshops, sometimes interspersed among buildings or the “courtyards” (αὐλαί) of which they formed part;¹⁵⁸ the revenues from these may have served special purposes. Attaleiates owned several buildings together with their commercial “courtyards” at Constantinople, Rhaidestos, and Selymbria; in his will, he deeds to the hospice and the monastery that he founded the revenues of a bakery in the capital (leased at 24 nomismata), of a perfumery (leased at 14 nomismata), and of premises rented out to a physician at 5 nomismata.¹⁵⁹ A novel of Manuel I (1148), repeated by Isaac II Angelos (1187), makes mention of one Chrysobasileios, proprietor of the *skala* of St. Marcian “cum universa ejus comprehensione et conti-

¹⁵⁴ In EB, 4.6, the term οἰκόκυρος/οἰκοκύριος probably designates the operator, rather than the proprietor, of an ἐργαστήριον βεστιοπρατικόν.

¹⁵⁵ EB, 4.9; 9.4; 10.3; 11.7; 13.6; 18.5; 19.2.

¹⁵⁶ *Itinerary of Benjamin of Tudela*, ed. Adler, 13.

¹⁵⁷ *Vie de Jean de Chypre*, chap. 14 (p. 363).

¹⁵⁸ An αὐλή was an interior courtyard bordered on all sides with buildings, generally including some shops. Regarding the topography of these *aulai*, see in particular *Actes de Docheiariou*, ed. N. Oikonomides, Archives de l’Athos (Paris, 1984), no. 4 (pp. 73ff), and *Actes d’Iviron*, ed. J. Lefort, N. Oikonomides, and D. Papachryssanthou, Archives de l’Athos, 4 vols. (Paris, 1985), 2: no. 52 (commentary by J.-P. Grégoire, “A propos du monastère du Prodrome à Thessalonique,” *Byzantion* 59 [1989]: 78–87). The ownership of an αὐλή includes that of its shops; such was the case for the majority of the large Athonite monasteries in Thessalonike, Hierissos, and elsewhere: *Lavra*, 1: nos. 18, 59; *Iviron* and *Docheiariou*, as above; such was also true for the Constantinopolitan monastery of Pantokrator at Panion near Rhaidestos, for the Jewish quarter of Koila near Abydos and the *emporion* of Madytos and Smyrna (“Le *Typikon* du Christ Sauveur Pantocrator,” ed. P. Gautier, *REB* 32 [1974]: 115, 117, 119, 121), and for Pakourianos at Peritheorion (“Le *Typikon* du Sébaste Grégoire Pakourianos,” ed. P. Gautier, *REB* 42 [1984]: 37).

¹⁵⁹ “La *Diataxis* de Michel Attaliatē,” ed. P. Gautier, *REB* 39 (1981): 42–45, 98–101; cf. Lemerle, *Cinq études*, 109–11; Harvey, *Economic Expansion*, 227.

mentia et quae in ea sunt domibus et ergasteriis.”¹⁶⁰ Demetrios Chomatianos (12th–13th century) cites the testament of an individual named George Euripiotēs, whose patrimony included a butcher shop near the Forum of Constantine.¹⁶¹ The dues collected by the owners of fair stalls also warrant passing mention.¹⁶²

Nonetheless, deeming insufficient the revenues gained from sites rented out to artisans, the rich or the “powerful” may have sought to engage more directly in commercial speculation by means of loans or investments, or even by placing at the head of the *ergasterion* a dependent financed by them, and thus enrolling him in the guild; such situations seem to have been permitted under tenth-century prefectural rules. What was not permitted, however, was the creation of a parallel economic sector. The concern of the legislators was not to bar the aristocracy from all commercial activity,¹⁶³ but rather to preserve the existence of guilds to the extent possible—a difficult task in a system that was tending increasingly toward economic freedom.

Taxes, Duties, and Parallel Networks

Taxes, Tax Grants, and Tax Devolutions We are less well informed about the taxes and various dues that were levied on artisans and merchants than we are about the taxation of land and the peasantry. We may nonetheless distinguish, in addition to ground rents for shops or market stalls, the following:

1. a base tax (τέλος), undoubtedly comparable to an urban land tax, attached to buildings and, it would seem, paid by the proprietor if levied by the fisc, or by the shop’s operator, if, as commonly occurred, it was payable to an individual or a religious institution;
2. in certain cases, a tax proportional to the value or quantity of commercial products, but assuredly distinct from the *kommerkion*;¹⁶⁴
3. various payments to agents of the eparch or, possibly, to the leaders of the guild; and
4. finally, various obligations or corvées, assumed either in labor or in cash.

This general catalogue varied, of course, by trade and by city. Artisanal activity and commerce being more prosperous in Constantinople, they were also, it appears, more heavily taxed.

The documentation, which is exceedingly fragmentary, does not allow us to trace

¹⁶⁰ Zepos, *Jus*, 1:446–47. See Magdalino, *Constantinople médiévale*, 80.

¹⁶¹ J. B. Pitra, *Analecta sacra et classica Spicilegio Solesmensi parata* (Paris-Rome, 1891), 6:107 (no. 25).

¹⁶² See Laiou, “Exchange and Trade,” 730–32, as well as Papagianni, “Byzantine Legislation,” 1088ff.

¹⁶³ See the production and sale of silk textiles or garments, below, 435–35.

¹⁶⁴ See below, 450, with respect to fishermen, a somewhat exceptional situation to the extent that fishing was allied with agriculture. According to Ep. 7 (1:31) of Theodore of Stoudios, the empress Irene reduced the rate of this tax. For commentary on other fiscal aspects of the letter of 801, see N. Oikonomides, *Fiscalité et exemption fiscale à Byzance, IXe–XIe s.* (Athens, 1996), 30–31, 33, 39. Regarding the *kommerkion*, see N. Oikonomides, “The Role of the Byzantine State in the Economy,” *EHB* 986–88.

the evolution of fiscal policy, but does permit us to gauge its transformations and its effects at intervals. One may begin with two novels of Justinian, which cast light on certain dysfunctions about which representatives of corporations had come to complain to the emperor.¹⁶⁵ We learn that each corporation formed a “community” (κοινόν), responsible for allocating among its members a tax (τέλος), assigned once and for all by the fisc: in the event of tax evasion by certain individuals, a drop in the number of *ergasteria*, or a fiscal exemption granted by imperial fiat, individual payments became intolerable as the aggregate was apportioned among a smaller number of payers. This system of fiscal solidarity, which posed difficulties for the rural world, raised even more serious problems in an urban economy that was much less stable, in which business could easily sour or specializations readily alter. Moreover (and such was the gravamen of the complaint), legislative measures dating back to Constantine and to Anastasios had “granted” Hagia Sophia fiscal revenues from 1,100 shops, exempt from any other tax or duty from that point forward, so that the Great Church might ensure the transport of the dead to their resting place outside the city. This measure, the guild masters added, would have been sustainable had not a large number of other *ergasteria* belonging to churches, hospices, or monasteries, to imperial estates, and to functionaries and dignitaries also been exempted from any and all taxes and duties for the greater profit of their owners (upon whom this tax devolved, exemption representing nothing more than a tax transfer), and to the detriment of the guild members, who had seen their own portions of the balance due increase two-, three-, and even tenfold. The emperor decided to restore the “endowment” of Hagia Sophia, but to limit the exemption to 1,100 shops; in addition, he affirmed the fiscal status of all the other *ergasteria* and threatened to confiscate those whose proprietors had sought illegally to change “fiscal duties into personal income,” or those who sought to escape the collective tax through the “patronage” (προστασία) of a dignitary, a functionary, or an ecclesiastical establishment.

One may suppose that the decisions of 537 had little effect, given that the emperor himself multiplied the grants of taxes in favor of dignitaries, churches, or religious institutions. In seventh-century Alexandria, the official who made the rounds of the shops that belonged to the patriarchate collected not only the rents but also the “public taxes” (δημόσια τέλη) and the *sportulae* (συνήθειαι), as would a genuine functionary.¹⁶⁶ Again in this case the tax grants were rationalized by the social role of the church. But when the service rendered disappeared, as was the case with pauper burials in Constantinople, which were subsequently carried out by lay brotherhoods, the tax exemption became a privilege.¹⁶⁷ One may trace this evolution to its last stage thanks to

¹⁶⁵ CIC, 3:269–73, 316–24, Nov. 43 and 59; G. Dagron, “Ainsi rien n’échappera à la réglementation: Etat, Eglise, corporations, confréries. A propos des inhumations à Constantinople,” in *Hommes et richesses* (as above, note 37), 2:155–82.

¹⁶⁶ *Vie de Jean de Chypre*, chap. 14 (p. 363) (the interpretation, contained in a note, is erroneous).

¹⁶⁷ *Novelles de Léon VI*, 12 (pp. 50–51). Leo VI in examining Novels 43 and 59 of Justinian, noted that the Great Church no longer performed the services that justified its receipt of the tax revenues of 1,100 shops; he nonetheless maintained the tax grant, deeming that these sums, which for centuries had been commingled with normal revenues, would in any event be used for philanthropic purposes.

the discovery, on the last page of Codex Patmiacus 171, of notices drafted or recopied in 959 (the circumstances of their composition are uncertain) concerning the sale of five Constantinopolitan *ergasteria* during the two years preceding.¹⁶⁸

1. The type of business is specified with respect to four of the five: linen cloth or apparel, goatskin cloaks or headgear, articles of silk imported from Syria, all of which confirms the importance of textiles in the Constantinopolitan economy. It also bears mentioning that one of the shops includes a street stall rented out to a different business.
2. The text mentions nine proprietors, only one of whom, a *metaxoprates*, appears to run his own shop. The other *ergasteria* are leased to *ergasteriakoi* by proprietors who are not corporation members; five of them are functionaries or dignitaries in Constantinople.
3. The sale price of the shops—in other words, the capital invested by their proprietors—ranges from 6 to 10 pounds of gold (between 432 and 720 nomismata) for a rental income that ranges from 25 to 38 nomismata—higher than, but comparable to, the rents sought by Attaleiates a century later; they correspond to a return on investment of a little more than 5%.
4. The base tax on the buildings (τέλος), the base of which remains unknown, constituted between 0.17 and 0.81% of the sum invested, and was only in one case paid by the owner to the fisc. In the four other cases, the shop's operator-renter himself paid the tax directly to a pious institution: the bursar of Hagia Sophia in two cases,¹⁶⁹ the confraternities of the Baths of Germanos and of Xylinites, and the hospice of Euboulos.

Trends already discernible in the Justinianic legislation are here corroborated. Artisans and merchants were rarely the owners of their shops, a fact that does not mean that they were in a position of dependence. In addition to commercial taxes, strictly speaking, and rents, they were often subject to a tax that evidently continued to be widely ceded to pious institutions by the state. This tax was considered to be another form of revenue, thus encumbering a property whose “ownership” is unclear: it might attach to its user, to the proprietor of the premises, or to the beneficiary of the fiscal transfer. These roles did not blend into one another, but the distinctions among them were decidedly less fixed than they would be in the contemporary world, and the vocabulary sometimes leads to ambiguity. From the sixth to the tenth century, official policy with respect to artisanal industry was not dissimilar to the more clearly articulated policy that the emperors strove to apply to the rural world by defending the small proprietors of the *chorion*, who were characterized by solidarity in their obligations toward the fisc against the “patronage” of the powerful and the rapacity of large landowners. The policy remained contradictory, however, in cities as in the countryside.

¹⁶⁸ N. Oikonomides, “Quelques boutiques de Constantinople au Xe siècle: Prix, loyers, imposition (cod. Patmiacus 171),” *DOP* 26 (1972): 345–56.

¹⁶⁹ This may be a reference, in 959, to two of the 1,100 shops ceded to Hagia Sophia in the 4th–6th centuries.

Parallel Systems: The Church and the Oikoi

The greatest danger to the equilibrium of the “guild” economy was clearly the existence of parallel networks that were not subject to the same encumbrances, nor to the same constraints. The quasi-autonomous systems of production and sale that were organized by the church represented the first competing system. As evidenced by papyrological and epigraphic documentation from the early period, clerics and monks had access to a variety of occupations from the outset. With the exception of private “economies,” church canons felt it sufficient to bar the exercise of public functions—fiscal functions in particular—that would have put clerics in service to the state; employment as a steward or bursar for aristocratic families, which would have removed them from ecclesiastical supervision and placed them in a relationship of dependence; professions viewed as suspect or morally dangerous (innkeepers, physicians) or those that procured “shameful profit” (money-handling, lending at interest, working rented land; defense, against payment, of the interests of others). At the same time, these relatively simple criteria were applied with great flexibility and fared poorly against two opposing phenomena whose effects were nonetheless complementary: the integration on an individual basis of many clerics into civil society, and the development of the church’s wealth in land and property, which gave birth to a powerful ecclesiastical economy managed by numerous clerics or by members of the laity acting as intermediaries.¹⁷⁰

The problem of forbidden occupations crops up again in the canonical commentaries of the twelfth century under a new jurisprudence that was supported by several synodical acts of patriarchs such as John IX Agapetos, Loukas Chrysoberges, and Michael of Anchialos. One particular question arose—and was answered in the negative—of whether “readers” were subject to the same restrictions as “clerics of the sanctuary.” Rigorists stressed the incompatibility of the eparch’s “seal” required for entry into a guild with the episcopal seal given to clerics of all orders;¹⁷¹ they noted also the processions or festivals organized by tradesmen, in which clerics could not participate without being false to their calling. Do these repeated cautions denounce a common practice? It is difficult to answer in the affirmative with respect to clerics,¹⁷² but not so with respect to monks, whose status was somewhat hazier and who could more easily exempt themselves from the canonical rules. Eustathios of Thessalonike, in the twelfth

¹⁷⁰ Cf. E. Herman, “Le professioni vietate al clero bizantino,” *OCP* 10 (1944): 23–44; E. Papagianni, “Ἐπιτρεπόμενες καὶ ἀπαγορευμένες κοσμικὲς ἐνασχολήσεις τοῦ βυζαντινοῦ κλήρου,” in *Πρακτικὰ τοῦ Δ' Πανελληνίου Ἱστορικοῦ Συνεδρίου* (Thessalonike, 1983), 145–66; G. Dagron, “Remarques sur le statut des clercs,” *JÖB* 44 (1994): 44–47.

¹⁷¹ If, after some hesitation, the patriarchal tribunal authorized a deacon to pursue his activities in the practice of law, it was because it accepted the idea that he was exercising a “liberal” profession (ἐλευθέριον τι σπούδασμα) and that he did not belong to a σύστημα; see the commentary of Balsamon on Nomocanon 8.17, Rhalles and Potles, *Σύνταγμα*, 1:157–60.

¹⁷² At the two extremes of the period under discussion, we find two clerics (readers) who are shoemakers in Alexandria in *Vie de Jean de Chypre*, chap. 51, pp. 401–2, 514–15, and a priest/boatman in *The Life of Leontios, Patriarch of Jerusalem*, ed. D. Tsougarakis (Leiden, 1993), 46–47 (§ 12).

century, accused them of engaging in all trades imaginable, both in the city and in the countryside.¹⁷³

Such attitudes had only limited effect so long as they reflected individual positions. They corresponded, moreover, to an ancient monastic tradition that counseled solitary hermits to earn money through manual labor so that they would be a burden to no one and so that they could afford to give alms. The problem was different, however, when whole communities organized themselves as an economic network, a development evident in the reforms of Theodore of Stoudios. The rule that Theodore established at the very start of the ninth century placed a high value on nonagricultural and artisanal activities with the dual intent of extolling the penitential value of labor and of ensuring the autonomy of a community whose population might number a good thousand. As a result, products circulated between the Constantinopolitan monastery and its Bithynian dependencies and were, no doubt, partly commercialized in urban markets. The same would have held true for all monasteries of some importance. In the wake of Stoudios and the initiatives of St. Athanasios of Lavra,¹⁷⁴ the Athonite monasteries engaged in production, owned ships that traded their products at least as far as Thessalonike and Ainos—possibly even to Constantinople—and owned *aulai* in both those cities; it remains uncertain whether the *aulai* were leased to independent *ergasteriakoi* or whether they were intended for the sale of the monastery's surplus production.¹⁷⁵

No text better evokes this expansion of a monastic economy than the regulation issued, subsequent to an investigation, by Constantine IX Monomachos in 1045.¹⁷⁶ It seeks once more to limit the number and the tonnage of ships and notes that the *lavra ton Kareon* had become a commercial station (ἐμπόριον), in which the monks could sell and buy merchandise that they themselves were forbidden to use. The maritime export of surplus to the nearest markets was allowed but not the wholesale purchase of goods for retail resale at a higher price. It is likely that this commercial activity extended over a good number of urban markets and escaped most of the administrative rules and fiscal levies. A letter of John Tzetzes confirms it, contrasting the freedom that Constantinopolitan monks enjoyed to sell the fish that they had caught with the nitpicking supervision by the eparch's agents of fishermen or fishmongers who were members of the laity.¹⁷⁷

However, churches, monasteries, and "pious houses" were only individual cases in a more general system, that of the imperial, aristocratic, monastic, or charitable "houses" (*oikoi*) or foundations that placed into direct contact the income or products of landed

¹⁷³ *De emendanda vita monastica*, in *Eustathii metropolitae Thessalonicensis opuscula*, ed. T. L. F. Tafel (Frankfurt am Main, 1832), §§ 60, 62, 122–23, pp. 229, 243–44.

¹⁷⁴ *Vitae duae antiquae Sancti Athanasii Athonitae*, ed. J. Noret (Turnhout, 1982), *vita* A, 33–38 (§§ 71–81), 51 (§ 108); what the hagiographer praises, the monks of Athos condemn; cf. *Actes du Prôtaton* ed. D. Papachrysanthou, Archives de l'Athos (Paris, 1985), 95 ff.

¹⁷⁵ See *Lavra*, *Iviron*, and *Docheiariou*, cited above, note 158.

¹⁷⁶ *Prôtaton*, no. 8 (lines 53–77, 133–36).

¹⁷⁷ See below, note 384.

estates on the one hand, and, on the other, urban centers of administration, consumption, and redistribution: the οἶκος.¹⁷⁸ The term applied to establishments whose importance and character differed vastly but that shared a common structure. Most often, at the center of the *oikos* lay an aristocratic dwelling, organized under the status of a semipublic, semiprivate foundation, that included not only members of the household or of the community, but a good number of dependents and poor people grouped into a little society of consumers. By virtue of their social importance, certain “houses” were directly administered by palace bureaus, and many enjoyed imperial privileges, or, as we have seen, fiscal grants. In effect, little by little, they took over the functions of the state and the institutional church with respect to the provisioning of the cities and the organization of charitable works. Whether large or small, these economic entities concurrently ensured the wealth of the “powerful” who made use of them and the regulation of the urban economy, a troublesome affair. Quite naturally, they owned wharves and shops, sometimes clustered in courtyards (αὐλαί), which they might lease to others, and whose taxes they collected, or which they might exploit directly.

The competition between the monastic community and the aristocracy undoubtedly made the position of the guilds precarious. From the sixth century on, guild leaders complained that a good number of the *ergasteria* of Constantinople had become the property, or enjoyed the protection, of imperial dignitaries, imperial foundations, churches, hospices, or monasteries, thus escaping the shared obligations of the guilds. Thus these *ergasteria*, “given” to Hagia Sophia or to charitable institutions—and the *oikoi* in general—introduced disparities in the fiscal status of artisans and merchants that hurt the recognized guilds during the sixth to the tenth century.

But did they create a true parallel economy? It is doubtful, just as it is doubtful that, in the realm of agriculture, the difference in status between the large estates cultivated by *paroikoi* and small, independent properties created two distinct modes of exploitation. The studies of Paul Magdalino are illuminating in this regard.¹⁷⁹ They suggest two models: that of autarky—more literary than truly economic—and that of the *oikos*, whose operations were complex. The pursuit of autarky, counseled in the eleventh century by Kekaumenos, might impel the aristocrat who lived on his own lands sufficiently to diversify his activities—both rural (cultivation and livestock farming) and artisanal (mills or rudimentary *ergasteria*)—so that he would depend on no one and have as little recourse as necessary to monetary exchange.¹⁸⁰ It might also encourage a rich landowner, settled in town, to bring in products from his lands for his own consumption and to market the surplus. But this direct form of provisioning would

¹⁷⁸ Regarding the *oikos*, see, with respect to the early period, J. Gascou, “Les grands domaines, la cité et l’état,” *TM* 9 (1985): 1–90; P. Magdalino, “The Byzantine Aristocratic *Oikos*,” in *The Byzantine Aristocracy*, ed. Angold (as above, note 129), 92–111; see the good explication in Harvey, *Economic Expansion*, 229–33.

¹⁷⁹ See P. Magdalino, “The Grain Supply of Constantinople, Ninth–Twelfth Centuries,” in *Constantinople and Its Hinterland*, ed. C. Mango and G. Dagron (Aldershot, 1995), 35–47, esp. 37–39.

¹⁸⁰ Kekaumenos, above, note 10; on the subject of “autarky,” see Hendy, *Studies*, 565–68; M. Kaplan, *Les hommes et la terre à Byzance du VIe au XIe siècle: Propriété et exploitation du sol* (Paris, 1992), 493ff.

have been a limited phenomenon, since it imposed constraints of transport and storage that would have been quite incompatible with urban life; we have little evidence of it. In the majority of cases, it is likely that the economic system of the *oikoi* followed normal procedure: on-site sale of regional production, the participation of intermediaries who marketed the products (as we see in the case of livestock intended for slaughter),¹⁸¹ numerous duties paid at every stage (and in particular at the *skalai* of Constantinople). The monasteries and pious foundations that owned a good number of wooden wharves in the eleventh century probably did not limit their use to the transportation of their own products: they would have drawn a profit from them. A Constantinopolitan monastery such as Pantokrator, which had *emporía* or *aulai* in certain cities or large villages on the Sea of Marmara and in Asia Minor (Panion, Rhaidestos, Koila, Madytos, Smyrna) probably would not have used these resources to dispose of its own products, but rather to collect duties and rents.¹⁸² The same would have held true for large landowners who were members of the laity.¹⁸³ In short, the economies of pious or aristocratic “houses” and the “guild” economy had recourse to the same practices, just as, in the rural world, large estates and free villages had recourse to the same mode of exploitation. The differences between them were, above all, a matter of their fiscal status.

The Imperial Workshops Special mention must be made of products whose manufacture, storage, and distribution constituted a restricted sector, even a state monopoly: armaments and materiel (including the “Greek fire” whose formulation was in principle held secret), at least a portion of the equipment for the armies, certain categories of cloth, clothing and embroideries, goldwork for palace use, a fair number of copied or illuminated books, products of the mines, and, of course, coins.¹⁸⁴ However, whereas documentation from the early period gives precise data regarding the workshops or arsenals that were scattered among the principal cities of the empire (Thessalonike, Adrianople, Nikomedeia, Caesarea of Cappadocia, Sardis, etc.), medieval sources devote little discussion thereto, giving the impression that nearly all the provincial installations vanished in the torrent of the invasions. Unless we view the *kommerkiarioi* of the seventh to ninth centuries as a new kind of official whose task it was to collect, store, distribute, and possibly market the state’s production through entrepôts (*ἀποθήκαι*)—above all, goods intended for the arming and provisioning of soldiers—a position that remains only a hypothesis,¹⁸⁵ it should be recognized that this once important economic sector endured only in Constantinople, under the shadow of the palace.

¹⁸¹ See below, 448–49.

¹⁸² See above, note 158.

¹⁸³ See above, note 158, regarding Pakourianos, who owned a *metochion* at Mosynopolis, an *aule* at Peritheorion, and several *kastra*.

¹⁸⁴ See, in particular, the study by Kazhdan, “Tsekhi,” 150–53.

¹⁸⁵ It is that of several historians who stress the role of the state in maintaining economic activity during the Dark Ages: Hendy, *Studies*, 626–40, 654–62; the argument is adopted, with refinements, by J. F. Haldon, “Military Service, Military Lands, and the Status of Soldiers: Current Problems and

Let us simply take stock of our meager knowledge. The new administrative structures made the *archontes* of the imperial workshops (ἐργοδοσία) and their assistants or foremen (μειζότεροι) dependent on the logothete of the *eidikon*.¹⁸⁶ This structure undoubtedly included the *archon* of the Armamenton (ἄρχων τοῦ Ἀρμαμέντου), an important figure attested as of the mid-ninth century, who bore the dignity of *spatharios* and, subsequently, of *protospatharios*.¹⁸⁷ Seconded by a *kartoularios*, he directed the arsenal or several arsenals (*fabricae*) mentioned allusively in the sources, in the Magnaura or at the Golden Horn (under Maurice),¹⁸⁸ adjacent to the Magnaura (under Nikephoros II Phokas),¹⁸⁹ and in the deconsecrated buildings of St. Euphemia near the hippodrome (under Constantine V).¹⁹⁰ Precedence lists and seals mention a factory and a store of arms intended specifically for the fleet, τὸ κάτω ἄρμαμέντον,¹⁹¹ but it seems quite likely that these state arsenals did not have the same importance as they did when their workers, the φάβρικῆσιοι, held a special place in the adventus procession of Justinian I, after the merchants and alongside the *magistrianoi*.¹⁹² A number of texts, among them the two chapters on the Cretan campaigns incorporated in the *Book of Ceremonies*, show that the equipping of the army was thereafter ensured in part by the *eidikon* and in part by dues and corvées imposed on civilians by the *strategoï* of the themes acting as intermediaries. It is worth recalling that the Constantinopolitan saddlers' guild, no doubt like several others, was answerable to the eparch under normal circumstances, but came under the orders of the *protostrator* with respect to "public service" and was paid out of the imperial treasury for these services.¹⁹³

While the equipping of the army now rested only in part on centralized manufacture, this was not the case with respect to the luxury industry, which supplied the demand for clothing, fabrics, and embroideries intended for the emperor, the court, and foreigners whom the court sought to honor. The *Book of the Eparch*, and a contemporaneous text regarding the emperor's "supply train" on his military campaigns, make a clear distinction between the cloth and clothing for which the palace maintained a manufacturing monopoly and what was purchasable on the open market (ἐξ ἄγορᾶς ἀπὸ τοῦ φόρου).¹⁹⁴ It is certain that the clothing and various insignia conferred on dignitaries as symbols of their rank—the *loroi*, *chlamydes*, or *skaramangia* worn in

Interpretations," *DOP* 47 (1993): 15–17, and A. Dunn, "The *Kommerkiarios*, the *Apotheke*, the *Dromos*, the *Vardarios*, and the *West*," *BMGS* 17 (1993): 3–24. On the role of the *kommerkiarioi*, see Oikonomides, "Role of the State," 984ff.

¹⁸⁶ Oikonomides, *Listes*, 123, 317; see also V. Laurent, *Le corpus des sceaux de l'Empire byzantin*, 2 vols. (Paris, 1963–81), 2:325–46.

¹⁸⁷ Oikonomides, *Listes*, 57, 61, 155, 233; regarding the Armamenton, see Haldon's discussion in *Byzantine Praetorians*, 318–23.

¹⁸⁸ *Georgius Cedrenus*, ed. I. Bekker, 2 vols. (Bonn, 1838–39), 1:698 (hereafter *Kedrenos*); *Patria*, 3:155, ed. Th. Preger, *Scriptores originum Constantinopolitanarum* (Leipzig, 1901; repr. New York, 1975), 265; R. Janin, *Constantinople byzantine* (Paris, 1964), 455.

¹⁸⁹ *Kedrenos*, 1:709; *Patria*, 2:34, ed. Preger, 168; cf. Janin, *Constantinople byzantine*, 314.

¹⁹⁰ Theophanes, 1:440; *Patria*, 3:9, ed. Preger, 217.

¹⁹¹ Oikonomides, *Listes*, 317 and n. 174.

¹⁹² Haldon, *Three Treatises*, 138–41.

¹⁹³ *EB*, 14.1.

¹⁹⁴ *EB*, 4.1; 8.1; Haldon, *Three Treatises*, 112 (text), 230 (commentary).

ceremonies and often stored in churches or in the palace vestiaries—were manufactured in imperial workshops dedicated to the weaving or embroidering of precious fabrics, such as the one established in the Palace of Marina¹⁹⁵ or another that was partially burned by lightning on 25 December 792.¹⁹⁶ These workshops supplied the court of Constantinople, but also foreign courts (see Figs. 1–4): a letter of Romanos I mentions 100 *skaramangia* given to Symeon of Bulgaria, undoubtedly in fulfillment of the terms of a treaty of Leo VI.¹⁹⁷ We also know that there existed “soap makers of the imperial wardrobe” (σαπωνισταὶ τοῦ Βεστιάριου).¹⁹⁸

The workshop of the imperial goldsmith is also well attested. Under Michael III, it produced a chalice decorated with precious stones and pearls, which the emperor had carried up to the altar of Hagia Sophia during the Festival of Lights by the *spatharios* who crafted it (σπαθάριος καὶ χρυσοεψητής) before making the formal offering himself.¹⁹⁹ That individual, mentioned under the same title in the *Kletorologion* of Philotheos,²⁰⁰ is known in other sources as ἄρχων τοῦ χρυσοχείου.²⁰¹ The crowns ordered by the emperors for their personal use,²⁰² as votive offerings in one church or another, or for diplomatic gifts, came from this same workshop.

One would like to know more about the organization of these state factories, which at this point, oriented more toward the needs of the palace and products of high luxury, played a smaller role in the city’s economic life than they had in the past. Undoubtedly, as at other times, the factories made use of significant numbers of slaves: During the persecutions of the second iconoclastic period, a Stoudite monk named Arkadios became a slave in a workshop that wove imperial cloth;²⁰³ the βασιλικοὶ οἰκέται constituted a special category, and a novel of Leo VI sought to improve their lot.²⁰⁴ Did they

¹⁹⁵ Ch. Angélide, “Un texte patriographique et édifiant: Le *Discours narratif sur les Hodègoi*,” *REB* 52 (1994): 144–45 (text and translation), 119–20 (commentary): Constantine V grants the monk Hypatios, in recompense for a service, the church of the Hodegoi, located near the Palace of Marina, where the imperial garments (βασιλικὴ ἱστοργικὴ ὕφανσις) were woven.

¹⁹⁶ Theophanes, 1:469: more specifically, a workshop for gold embroidery: Βασιλικὸν ἐργοδόσιον τῶν χρυσοκλαβαρίων κατὰ τὸν χρυσίωνα. Regarding this type of gold embroidery, see A. Chatzemi-chale, “Τὰ χρυσοκλαβαρικὰ-συρματέϊνα-συρμακέσικα κεντήματα,” in *Mélanges offerts à Octave et Melpo Merlier à l’occasion du 25^e anniversaire de leur arrivée en Grèce* (Athens, 1956), 2:447–98.

¹⁹⁷ Theodore Daphnopates, *Correspondance*, ed. J. Darrouzès and L. G. Westerink (Paris, 1978), ep. 6 (dated 924/925), 78–79.

¹⁹⁸ *De cer.*, 2:15 (p. 578, line 17).

¹⁹⁹ *De cer.*, 2:31 (p. 631).

²⁰⁰ Oikonomides, *Listes*, 155.

²⁰¹ *Theophanes Continuatus*, 400; *Leo Grammaticus, Chronographia*, ed. I. Bekker (Bonn, 1842), 305; *Georgius Monachus Continuatus, Vitae recentiorum imperatorum*, in *Theophanes Continuatus*, ed. I. Bekker (Bonn, 1838), 892: Romanos Lekapenos was warned of a plot hatched by Anastasios, *sakellarios* and *archon* of the imperial gold workshop.

²⁰² Thus the three crowns that Constantine VII Porphyrogennetos “ordered to be manufactured” (*De cer.*, 2:15 [p. 582]); the chapter describes the use of goldwork in general for the adornment of the palace.

²⁰³ Theodore of Stoudios, ep. 390 (2:541).

²⁰⁴ Novel 38 allows them to dispose of their property both during their lifetime and at the moment of their death: *Novelles de Léon VI*, 150–53. On the importance of slavery in the imperial workshops, cf. Hadjinicolaou-Marava, *Recherches*, 25, 35, 45, 47; Kazhdan, “Tsekhi,” 152.

depend on the guilds? It would seem doubtful. In an episode reported by Leo the Deacon, a similar term, σύστημα, is used with respect to the workers in the imperial textile workshops,²⁰⁵ but undoubtedly under the broader meaning of “group” or “body,” and not in the specialized sense of “corporation” (“guild”).

The Trades

There can be no question here of studying all the trades in this context, or of inventoring them. I have thus passed over those that need to be approached through archaeological analysis and that are treated separately in this book (construction, glass, metallurgy, etc.) and those that the sources mention only in passing. The remainder are grouped into three principal subheadings: money, the discussion of which supplements and details the treatment of the financing of the urban economy and serves as an introduction to the chapter regarding loans at interest;²⁰⁶ clothing, the focus being mainly on silk, without encroaching on the technical study devoted to this prestige material in this volume; and, finally, the important topic of provisioning. It is essential to stress again that Constantinople overshadows the rest of the empire with respect to the documentation available to us, but that it represents almost single-handedly the urban phenomenon in its pure state, until the awakening of the cities and the enrichment of a middle class during the eleventh and twelfth centuries multiplied the centers of consumption and appreciably enlarged demand.

The Handling of Money

Money Changers Money changers held a central position in the urban economy and in the construction of the town in the popular imagination. In Rome, numerous images and texts show the *nummularii* (*trapezitae* or *mensarii*) working at their tables with a coin scale and accounting registers, performing their money-changing and assaying activities, that is, the verification of the fineness and weight of the coins used in transactions; with the coins’ authenticity and soundness of their alloy assured, they were placed by the money changers in sealed sacks.²⁰⁷ In the large Byzantine cities, sources,

²⁰⁵ *Leonis Diaconi Caloënsis historiae*, ed. C. B. Hase (Bonn, 1828), 145–47; the passage is studied in A. Christophilopoulou, “Σύστημα βασιλικῶν ἱστορυγῶν: Ἐνα σωματεῖο κρατικῶν ὑφαντουργῶν τὸν Ι’ αἰῶνα,” in Βυζάντιον: Ἀφιέρωμα στὸν Ἀνδρέα Σπράτον (Athens, 1986), 1:65–72. In the course of a plot in favor of the *kouropalates* Leo Phokas in 971, one of the plotters goes to find a friend, who is head of the βασιλικὴ ἱστοργία, and asks him to support the revolt μετὰ τοῦ τὴν ἱστοργικὴν αὐτουργοῦντος συστήματος. One should interpret this to mean, I believe, “together with all of the staff” of the factory. It should be noted again that there was no guild of laborers.

²⁰⁶ See D. Gofas, “The Byzantine Law of Interest,” *EHB*.

²⁰⁷ The bibliography, sparse for the Byzantine period, is rich and detailed for the Roman period. Of particular note is J. Andreau, *La vie financière dans le monde romain: Les métiers de manieurs d’argent à Rome entre le 1^{er} siècle avant et le 3^e siècle après J.-C.* (Rome, 1987); with respect to the Byzantine period, see the work of A. Laiou on lending at interest, especially “God and Mammon: Credit, Trade, Profit and the Canonists,” in *Τὸ Βυζάντιο κατὰ τὸν 12ο αἰῶνα*, ed. N. Oikonomides (Athens, 1991), 261–300. A succinct discussion of the trades appears in Hendy, *Studies*, 242–53.

albeit less numerous, describe the same activities and the same individuals, designated by a variety of synonyms (τραπεζίτης, καταλλάκτης, χρυσοκαταλλάκτης, κερματιστής, κολλυβιστής, ζυγοστάτης). They operated their shops or set up their iron tables in commercial zones, in particular on the Mese where they disturbed the visit of Kilidj Arslan in 1161 by hammering on their iron change tables;²⁰⁸ their piles of money aroused the cupidity of rulers;²⁰⁹ they were folkloric figures, and the popular imagination accused them of working with loaded scales,²¹⁰ or, in the case of Michael IV Paphlagon (who practiced the trade before becoming emperor), of coining false money.²¹¹ They filled a relatively simple role in an economy in which there was no coexistence of different monetary systems that would have necessitated currency conversions.²¹² However, they were extremely important in daily life, given the wide margins between the gold nomisma, the silver miliaresion, and the copper follis. Their presence in the city's economy placed small change at the disposal of private individuals for use in purchases or gifts. Thus we are told that St. Markianos was in the habit of waking a *trapezites* in the middle of the night to convert a nomisma into folleis for distribution to the poor; the *trapezites* took advantage of the fact to demand an unduly high commission.²¹³ Conversely, they alone were entitled to exchange for gold pieces the copper coins that shopkeepers accumulated, and they were barred from hoarding for fear of creating shortages, that is, for fear that they would engage in currency speculation based on denominational equivalencies.²¹⁴ Because these activities were tied to coinage and to the circulation of money, the money changer, while engaged in private commercial activity, was also a public individual, subject more intensively than others to the supervision of the authorities,²¹⁵ and required to answer to summons or requisitions concerning the minting of money or the gathering of older issues for replacement by newer ones.²¹⁶

It should come as no surprise that the prefectural regulatory scheme emphasized the honesty required of money changers and expected them to produce unassailable witnesses to their moral character prior to their enrollment in the guild. It was expected that they not indulge in felonious practices (clipping or paring the gold of the

²⁰⁸ Choniates, 120: here again they are called ἀργυροκόποι ἀγοράϊοι. See also Robert de Clari's description of the money changers, *La conquête de Constantinople*, ed. Ph. Lauer (Paris, 1924), 91, pp. 88–89.

²⁰⁹ That of Gainas as early as ca. 400: Sozomen, *Historia ecclesiastica*, 8.4, PG 67:1524–25.

²¹⁰ *Parastaseis* 37, *Patria*, 3:89, ed. Preger 40–41, 247–48.

²¹¹ Skylitzes, 390.

²¹² Although in Constantinople the currency of the Islamic East may have circulated and, later, that of the Latin West.

²¹³ *Life of Saint Markianos*, para. 18, PG 114:449–52.

²¹⁴ *EB*, 9.5; 10.4; cf. C. Morrisson, “Manier l'argent à Constantinople au Xe siècle,” in *Eupsychia: Mélanges offerts à Hélène Ahrweiler*, 2 vols. (Paris, 1997).

²¹⁵ In particular to that of the eparch: *Dig.* 1.12.9; *Bas.* 6.4.2, § 9; *Eisagoge*, 4.6, Zepos, *Jus*, 2:243.

²¹⁶ The *Book of the Eparch* requires that he answer summons: *EB*, 3.1. In the early period, one of the functions of the money changer consisted in retiring from circulation the nomismata of usurpers or of emperors who had suffered the *damnatio memoriae* (Symmachus, *Relationes*, 29, MGH *AA* 6.1, 303–4).

nomismata or the silver of the miliaresia, making counterfeit pieces), that they inform the eparch of counterfeiters or those trading in illicit coins,²¹⁷ and that they respect standard rates of exchange, in particular for silver coins, which were worth 24 folles and were not to be undervalued if intact and bearing the portrait of the emperor.²¹⁸ To avoid the dilution of responsibility and the illicit practice of the trade, the *Book of the Eparch* stresses the personal responsibility of the money changers and lays emphasis on fixed locations for their activities: money changers could not, in the event of their absence, turn over the care of their *trapezai* (a bench or a simple table) to a slave, an action that might have given rise to embezzlement.²¹⁹ They were limited to no more than two assistants, for whom they stood surety, to tally the coins.²²⁰ They were prohibited from sending their people into public squares or into the streets—that is, from putting them in contact with clients—and from conducting money-changing activities from which they might profit.²²¹ Finally, they were required to expose individuals fraudulently making change “on the run” (the *sakoullarioi*).²²² Nothing is said with respect to the commission earned on each currency transaction, which must nonetheless have been fixed.

Given that money changing borders on banking, it is likely that the activity of the *trapezitai* often extended toward deposit and credit activities—at the very least, short-term loans provided on the spot to buyers at auctions and fairs.²²³ In the seventh century, John Moschos, speaking of a *trapezites* who is also an *argyroprates*,²²⁴ makes a distinction that was scarcely pertinent several centuries later, when the two specialties were considered complementary and when money speculators, having become wealthy and powerful, were uniformly treated as “money changers” (an allusion to their trade of origin) in order to be discredited more effectively.²²⁵

²¹⁷ *EB*, 3.1, 5.

²¹⁸ *EB*, 3.3.

²¹⁹ *EB*, 3.1.

²²⁰ *EB*, 3.4.

²²¹ *EB*, 3. 6. The text specifies that the money changer may not give his subordinates whom he has sent forth as canvassers *λογάριον εἶτε νομῖον*, a phrase that is difficult to understand: “livres de compte et argent” (Nicole, *Livre du préfet*); “Geld in [Edelmetall-] oder [Kupfer-] Münze” (Koder, *Eparchenbuch*, with some hesitation); “monnaie en sacs scellés et monnaies en vrac” (Morrisson, “Manier l’argent”; see note 214).

²²² Regarding these “unlicensed” money changers, see Andreau, *La vie financière*, 249–51; the *saccularii* engaged in money changing by walking about the squares and carrying the coins in a bag, rather than exhibiting them on a stationary table; they took advantage of the fact to rob those who spoke to them. Ulpian characterizes them as “qui vetitas in sacculis artes exercentes, partem subducunt, partem subtrahunt” (*Dig.*, 47.11.7).

²²³ Regarding deposit services, see the ζυγοστάτης of the *apophthegma* “Nau 48,” *ROC* 2 (1907): 176–77, who denies having received a sealed deposit of 500 nomismata on which his client seeks to borrow. Regarding short-term credit at auctions, cf. Andreau, *La vie financière*, 115, 137, 152; regarding credit at fairs, which undoubtedly would also have allowed buyers to move about without carrying excessive amounts of cash, cf. Symeon the New Theologian, *Traité théologiques et éthiques*, ed. J. Darrouzès, vol. 2, 12.43–48 (p. 386), in which the loan is accidental; in this case, the products purchased are used to reimburse creditors in advance of other claimants: *Peira*, 26.1, Zepos, *Jus*, 4:113.

²²⁴ *Pratum spirituale*, para. 185, PG 87:3057–61.

²²⁵ See below, note 248.

With the expansion and the liberalization of the urban economy, the trade continued to develop, and even clerics became involved, provoking reaction from both the emperor and the patriarch. In a *prostagma* of 1151 or 1161, Manuel I Komnenos, stressing the incompatibility between the dignity of clerics and the corporal punishment meted out to money changers who contravened the prefectural regulations, ruled that clerics who had purchased “money-changing stalls” (καταλλακτικὰ τραπεζοτόπια) would be obligated to resell them to a “Roman” layman of good repute, whom they would present to the eparch as a substitute; he would receive the eparch’s seal without any payment for the prerogative.²²⁶ A little later, Patriarch Mark of Alexandria sought the opinion of the synod of Constantinople as to whether it was dangerous for a priest or a deacon to lend at interest or to become a money changer (καταλλάκτης).²²⁷

Goldsmiths and/or Bankers The ambiguity of the term ἀργυροπράτης/*argentarius* has often been noted: the term refers to goldsmiths in some cases, bankers in others. Quite recently, Jean Andreau undertook to show that the ambiguity is removed by taking the chronology into consideration, and that the *argentarii*, prior to the fourth century, were never goldsmiths, but genuine bankers engaging in short-term credit at auctions, deposit services, certain forms of cashiering services, loans at interest, and often—in competition with the *trapezitae*—assaying coins and money changing.²²⁸

At the same time, however, in the *Book of the Eparch* (in which the *argyropratai* appear immediately after notaries, just before money changers, and ahead of artisans and merchants strictly speaking, a placement that corresponds with their place in the ceremonial)²²⁹ the description of their trade gives no glimpse of any activity other than goldsmithing and jewelry making. The *argyropratai* worked gold, silver, pearls, and gemstones exclusively;²³⁰ they not only manufactured and sold their own products, but also purchased objects from private individuals, for which purpose they kept ready sums of *miliaresia* on their counters on market days.²³¹ They conducted appraisals and were requested, in the event of contradictory valuations, to refrain from arguing with each other.²³² The prohibitions or controls are in keeping with the handling of precious

²²⁶ Rhalles and Potles, Σύνταγμα, 4:469; Zepos, *Jus*, 1:416–17, a *prostagma* of Manuel I, which simply repeats the text given by Balsamon; Dölger, *Regesten*, no. 1384; see Laiou, “God and Mammon.”

²²⁷ Questions 5 and 27, Rhalles and Potles, Σύνταγμα, 4:451–52, 468–70. Commenting on Canon 76 regarding the trades forbidden inside the courtyards of churches, Balsamon and Zonaras cite the κολλυβισταί (in addition to the κάπηλοι), allude to the episode of Jesus driving the “merchants” from the Temple, and enumerate the measures taken by the patriarchs to expel the money changers from the environs of Hagia Sophia: Rhalles and Potles, Σύνταγμα, 2:480–82.

²²⁸ Andreau, *La vie financière*, 44 and n. 94, 62, 83, 137, 538–48.

²²⁹ See, for example, the account of the triumph of Justinian in 559, during which the ἀργυροπράται line the streets behind the office of the eparch and precede the πάντες πραγματευταὶ καὶ πᾶν σύστημα (Haldon, *Three Treatises*, 140–41); *De cer.*, 1.1 (pp. 12–13). The first are cited by name and distinguished from the guilds as a whole.

²³⁰ *EB*, 2.1.

²³¹ *EB*, 2.2–3.

²³² *EB*, 2.2, 11.

materials whose export was prohibited and which were frequently subject to theft and thus became stolen goods: without special authorization, goldsmiths or smelters²³³ were prohibited from purchasing more than a pound (324 g) of gold or silver at one time; they could not exercise their trade at home—that is, without supervision—but only in the workshops of the Mese.²³⁴ Any alteration of metals entailed severe punishment; the eparch was to be notified of objects or jewels whose provenance or destination was suspect, or of consecrated articles improperly deconsecrated, or of objects offered for sale by women or by foreigners suspected of seeking to export them.²³⁵ As with money changers, the regulations stress the requisite presence of the goldsmith at his shop, the surety required to open a shop, and the responsibilities of the head of the corporation, in a trade that seems to have included many slaves, perhaps because of the technical skill of certain foreigners, but also because wealthy investors took an interest in the profitable profession and assigned to it an individual who was wholly dependent on them.

Should we conclude that the *argyropratai* of the early tenth century had no activity other than goldsmithing and see in this a retrenchment in the economic life of Byzantium relative to that of Rome? Certainly not. In the Byzantine sources, the *argyropratai* appear as either simple goldsmiths or as goldsmiths of such wealth that they quite naturally extended their activities toward lending at interest, or, finally, as genuine money handlers operating at a notch above money changers. Anastasios the Persian was hired as an apprentice with true goldsmiths/jewelers in Hierapolis/Mabbug and subsequently in Jerusalem.²³⁶ However, in the account of John Moschos, noted above, we see a money changer who negotiates the purchase of a precious stone as would a goldsmith and financier;²³⁷ the *Miracles of Saint Artemios* present a reader of the church of St. John Prodromos in the Oxeia of Constantinople, whose parents live διὰ τοῦ χρυσοκαταλλακτικοῦ καὶ σημαδαρικοῦ πόρου—concomitantly money changers and lenders; they try, in vain, to have their son learn the trade: weighing coins to within a margin of 1/6 of an ounce, using loaded scales, offering usurious lending rates, and making unlimited profit on pawned or pledged objects.²³⁸ There is no ambiguous semantic distinction here, but rather a continuity in practice between goldsmithing and banking. Whether goldsmiths or not, the *argyropratai* of the exemplary tales and of the chronicles were very wealthy individuals, who had significant assets at hand and knew how to make them grow.²³⁹

²³³ It is difficult to say whether these are synonymous or represent two different guilds.

²³⁴ Regarding this localization see *Chronicon Paschale*, 1:623, on the fire of 532.

²³⁵ *EB*, 2.4–8, 10. The theme of the fraudulent resale of a sacred vessel is often treated in the hagiographic literature.

²³⁶ Flusin, *Saint Anastase le Perse*, 1:48–51 (*Actes anciens*, 8, 10), 310–13 (*Passion métaphrasée*, 3).

²³⁷ *Pratum spirituale*, para. 185, PG 87:3057–61.

²³⁸ Miracle 38, ed. Papadopoulos-Kerameus, *Varia Graeca Sacra*, 62. In *Vie de Jean de Chypre*, chap. 40, pp. 392, 502, the τραπεζίτης whose business fares badly for as long as he neglects to give to the poor is probably also a money changer/usurer.

²³⁹ See, for example, *Vie et récits de l'abbé Daniel de Scété*, 10, ed. L. Clugnet, *ROC* 5 (1900): 370–84; Sophronios, Patriarch of Jerusalem, *Encomium* of Saints Kyros and John, Miracle 32, ed. N. Fernandez Marcos, *Los Thaumata de Sofronio: Contribucion al estudio de la incubatio cristiana* (Madrid, 1975),

It is worth noting that the goldsmiths of the *Book of the Eparch* conducted valuations that may correspond to loans on collateral and tallied their silver coins just as the money changers tallied their copper change. The precious materials and the luxury objects that they handled constituted a portion of their fortune and undoubtedly were often resold. Worked gold and silver, like gems or pearls, represented forms of savings or exchange in Byzantium, as much as they constituted works of art: inventories appraised them according to weight. In his testament (1090), Symbarios Pakourianos notes that he used his wife's dowry of 50 pounds of gold in specie to purchase various silver objects to which she holds title, and we find gold and silver objects in her own assets several years later (1098).²⁴⁰ Silk cloth, dyed silks, and silk garments had a somewhat similar character. Nor is it surprising to find among the novels of Leo VI four measures that can be linked to one another, outlining a policy of reflation and economic "liberalization": (1) the lifting of a ban on the sale of scraps of purple cloth;²⁴¹ (2) the lifting of restrictions on the manufacture and sale of gold and precious objects "whose use is not reserved to the emperors alone";²⁴² (3) the confirmation of the legality of lending at interest;²⁴³ and, finally, (4) the authorization to allow coins from prior reigns to circulate (on condition that they be genuine and unaltered) to avoid a shortage in legal tender that would have been harmful to commerce.²⁴⁴

If the *Book of the Eparch* describes only the goldsmiths, it is because it takes sole interest in those aspects of the activity of their corporation that fell under the direct jurisdiction of the prefecture. It leaves aside those activities governed by imperial legislation or by specific canonical texts regarding lending at interest.²⁴⁵ In these sources, the *argyropratai* are portrayed above all as specialists in credit activities, well organized as a guild, considered to hold a public function,²⁴⁶ with accounting books that can attest to their good faith,²⁴⁷ ranked above money changers both socially and hierarchically,²⁴⁸

308–12. In the account *De sacerdotio Christi* (BHG 810–811), the very wealthy Jew who refuses to convert is an ἀργυροπράτης; ed. A. Adler, *Suidae Lexicon* (Leipzig, 1928), 2:620–25, s.v. "Ἰησοῦς Χριστός."

²⁴⁰ *Iviron*, 2: no. 44 (line 5) and no. 47 (line 52). See also the daughter of Michael Psellos, whose dowry totals 50 pounds of gold: 10 in specie, 20 in objects of value, and 20 pounds being the value of the dignity of *protospatharios*: Sathas, *MB*, 5:205, lines 8–24.

²⁴¹ *Novelles de Léon VI*, 80 (pp. 272–75).

²⁴² *Novelles de Léon VI*, 81 (pp. 275–77). This law is explicitly linked to the preceding one.

²⁴³ *Novelles de Léon VI*, 83 (pp. 280–83).

²⁴⁴ *Novelles de Léon VI*, 52 (pp. 198–201), which simply reproduces *CI* 11.11.1, and 3.

²⁴⁵ See Gofas, "Interest," and Laiou, "Exchange and Trade," 732–35.

²⁴⁶ *Dig.* 2.13.10.2 = *Bas.* 7.18.10. It bears recalling that *CI* 12.57.12 (of 436) barred those who devoted themselves to commerce, including the *trapezitai* and sellers of precious stones, silver, or garments, from taking any public office, so that the *militia* would avoid any dishonor; *CI* 12.34.1–4 (of 528–529), however, carved out an exception for the *argenti distractores* of Constantinople, who were allowed to keep their position on condition of abandoning trade of any sort. One is reminded, with respect to this period, of the ἀργυροποιός Peter Barsymes, who became *praefectus praetorio per Orientem* after the fall of John the Cappadocian: Prokopios, *Historia arcana*, 22.3).

²⁴⁷ *CI* 4.21.22 = *Bas.* 22.1.80, § 5 and scholion 8.

²⁴⁸ In the rankings, the *trapezitai* always follow the *argyropratai*. This is the case in John of Ephesos' description of the extravagances of the emperor Tiberius II with respect to the *scholastici*, the physicians *necnon et argentarios et trapezitas* (*Ioannis Ephesini Historiae ecclesiasticae pars tertia*, trans. E. W.

but close to them by virtue of their trade and confused with them by the subtle play of synonyms. These are the creditors from whom the emperors periodically purchased debtors' promissory notes (σημάδια), so as to acquit the debtors or burn the notes with great ceremony;²⁴⁹ in the twelfth century, they are the great financiers, accorded fame and honor,²⁵⁰ as is Kalomodios, whom Niketas Choniates caricatures and calls a "money changer" (κολλυβιστής). Having made a fortune in large-scale and long-distance trade, Kalomodios has dealings with *archontes*, for whom he is undoubtedly a creditor; they set a trap to capture him and steal his money; barely do they lay hands on him, however, when a riot erupts in the city and the "tradespeople" gather to demand that Patriarch John Kamateros intervene with the emperor to secure the release of their associate.²⁵¹

The Textile Industry

The Silk Trades The *Book of the Eparch* devotes no fewer than five chapters to the production and marketing of silk, thus showing both the importance of demand and the concern of the state to organize the manufacture and control the sale of what was concomitantly a negotiable product, a valued asset in household patrimony, and the object of imperial bounty.²⁵² A detailed analysis of the processes of its manufacture appears in a separate chapter, but a short summary of the stages of the process is essential to understand the strict division of specialized guilds, with respect to Constantinople at least.²⁵³ When the transformation of the silkworm is interrupted, the cocoon must be unraveled and the filament wound onto reels. This drawing, or simultaneous reeling, of several cocoons produces the thread of raw silk, composed of the untwisted filament fibers, which adhere to each other by virtue of the gum. The raw thread must subsequently be washed (skimmed of its gum) and twisted in order to obtain the raw

Brooks (Louvain, 1952), 3.11 (pp. 100–101); under the ancient ranking of dignities, the *argyropatai* could be *clarissimi*, while the *trapezitai* were only *honestissimi*. We have several seals belonging to *argyropatai* (Zacos and Veglery, *Byzantine Lead Seals*, 1.1: nos. 315, 513, 828, 962, 1078; 1.2: no. 2209B), but none of the *trapezitai*.

²⁴⁹ Empress Sophia, in 567/568, asked the ἀργυροπράται and the σημαδάριοι to give her the promissory notes that they held (Theophanes, 242); Romanos Lekapenos solemnly burned the acknowledgments of debt of the inhabitants of the capital in a great popular celebration in front of the church of Christ of the Chalke (*Theophanes Continuatus*, 429–30; Skylitzes, 231).

²⁵⁰ Choniates, 483–84.

²⁵¹ Ibid., 523–24; cf. Laiou, "Exchange and Trade," 750–51.

²⁵² In an abundant bibliography, the following are particularly noteworthy: R. S. Lopez, "The Silk Industry in the Byzantine Empire," *Speculum* 20 (1945): 1–42; D. Simon, "Die byzantinische Seidenzünfte," *BZ* 68 (1975): 23–46; N. Oikonomides, "Silk Trade and Production in Byzantium from the Sixth to the Ninth Century: The Seals of the Kommerkiarioi," *DOP* 40 (1986): 33–53; D. Jacoby, "Silk in Western Byzantium before the Fourth Crusade," *BZ* 84/85 (1991–92): 452–500; A. Muthesius, "The Byzantine Silk Industry: Lopez and Beyond," *JMedHist* 19 (1993): 1–67, and the other works by the same author collected in *Byzantine Silk Weaving, AD 400 to AD 1200* (Vienna, 1995).

²⁵³ See the contribution of A. Muthesius, "Essential Processes, Looms, and Technical Aspects of the Production of Silk Textiles," *EHB* 147–68.



1. Quadriga silk, Constantinople, 8th century. Paris, Musée National du Moyen Age et des Thermes de Cluny, inv. no. 13289 (anc. M.L. 371) (after *Byzance: L'art byzantin dans les collections publiques françaises*, catalogue of the Louvre exhibition [Paris, 1992], 194)



2. Samson, silk, 9th century. Lyons, Musée des Tissus, inv. no. 875.III.1
(after *Byzance: L'art byzantin*, 199)



3. Silk, Constantinople, ca. 1000.
Shroud of St. Germain of Auxerre, church of
St. Eusèbe, deposited at the St. Germain Museum
(Musée-Abbaye Saint-Germain, Auxerre)
(after *Byzance: L'art byzantin*, 377)



4. Emperor on horseback, silk, tapestry weave. Bamberg, Diözesanmuseum
(photo: I. Limmer)



5. Retail merchant, Paris gr. 923 (9th century),
Homilies of St. John of Damascus
(after 'Ιστορία τοῦ Ἑλληνικοῦ Ἔθνους
[Athens, 1979], 8:208)

yarn. Weaving may take place either at that point, that is, prior to any dyeing of the yarn, or after the yarn has been dyed.

The first of the guilds that we see participating in the process were the *metaxopratai*, who alone were entitled to purchase, on the Constantinopolitan market, raw silk (*metaxa*) imported from sericultural zones.²⁵⁴ What were these zones, and how did the gathering and consignment take place? We do not know. When silkworking was an “imperial monopoly” and its raw material depended in whole or in part on imports from Persia, it is possible that commerce in imported raw silk and the collection of it in Byzantine territory were contracted out to the *kommerkiarioi*, whose seal guaranteed the product’s quality.²⁵⁵ By the beginning of the tenth century, however, when the *Book of the Eparch* was issued, that period had ended, and consignments thereafter undoubtedly were effected through a variety of sources and financing mechanisms.²⁵⁶ In any event, the *metaxopratai* were prohibited from traveling outside Constantinople to negotiate personally purchases from producers and thereby avoid competition.²⁵⁷ Nor did they have the right to work the silk themselves: they resold it in the condition in which they had purchased it to the *serikarioi*, who wove it, and, in part at least, to the *katartarioi*, who “dressed” the silk; they were prohibited from selling it to Jews or to other merchants suspected of seeking to export it from Constantinople.²⁵⁸ Their guild thus constituted a type of buying consortium under prefectural supervision, which avoided an excessive dispersion of the raw material, or, conversely, the establishment of private monopolies.

The *katartarioi* represented the next stage in the production process; their function seems to have consisted in the dressing of a portion of the silk prior to its weaving. They participated in the purchase of a part of the raw silk in the market of Constantinople, but subject to two conditions: (1) that their purchase be limited to the quantity of raw silk that they were able to process and that they not resell it in its unprocessed condition; and (2) that they come to an understanding with the *metaxopratai* to enter into the latter’s buying consortium and establish by common agreement the price for the purchase of the raw silk, which would subsequently have been turned over to the *serikarioi*, either in its unprocessed state by the *metaxopratai* or after its processing by the *katartarioi*.²⁵⁹ We have here either two distinct manufacturing procedures, one of which admits and the other of which omits a special treatment of the raw silk, which would have been the prerogative of the *katartarioi*, or else two modes of labor organiza-

²⁵⁴ *EB*, 6.5; 8.8. It is the raw silk and not the cocoons themselves that are at issue; the latter are much heavier and need to be reeled fairly quickly to avoid a deterioration of the filaments; cf. Simon, “Die byzantinische Seidenzünfte,” 25–26; Muthesius, “Silk Industry,” 34.

²⁵⁵ Oikonomides, “Silk Trade,” summarized in idem, “Commerce et production de la soie à Byzance,” in *Hommes et richesses* (as above, note 37), 1:187–92.

²⁵⁶ Sources of supply would have included the Arab world in general, which remained a significant exporter of raw silk to Byzantium, also southern Italy (see the works of A. Guillou, cited below, note 281), and the Peloponnese, the region within the empire best adapted to sericulture.

²⁵⁷ *EB*, 6.12.

²⁵⁸ *EB*, 6.14, 16; 7.4–5; 8.8.

²⁵⁹ *EB*, 7.1, 4–5.

tion, one of which would bring in specialized teams to treat the silk prior to its weaving, while the other would entrust this function to the *serikarioi* directly.²⁶⁰ In any event, to avoid a situation in which the guild of “silk dressers” might create a breach in the system of controls and lead to an excessive fragmentation of purchases and a lowering of the quality, only *katartarioi* with sufficient resources to buy wholesale had the right to enter into direct partnerships with raw silk merchants; they could thereafter cede a portion of their purchases to less wealthy *katartarioi*, for a commission capped at $\frac{1}{12}$ (= 8.3%).²⁶¹

The manufacture of silk cloth passed to the *serikarioi*, who represented the most important element of the manufacturing process; the guild included a great number of specialties, since its members directly dressed a portion of the raw silk, wove, dyed, and cut it. They ran businesses that included highly diversified workshops and that employed a great number of workers.²⁶² They certainly would have controlled the entire silk trade had not regulation prohibited them, on the one hand, from access to markets in the raw material, which they were forced to purchase from the *metaxopratai*, and, on the other, from selling the fabric or clothing that they manufactured and subsequently ceded to the *vestiopratai*.²⁶³ Thus, boxed in between two merchant guilds, they were expected, in principle, to engage solely in manufacturing. It is understandable that the regulations stress the rigorous controls exercised on them by the administration to ensure the quality of the silk and silk textiles, as well as to avoid any encroachment on the prerogatives of the imperial workshops.²⁶⁴ Government regulation affected a labor force that was numerous, hierarchically organized, and, in part, highly skilled. It sought to discourage workers from breaking their contracts and prohibited any transfer of these artisans to foreigners who would not lose the opportunity to draw advantage, as the Normans did in 1147 when they deported the Theban and Corinthian silk weavers and embroiderers to Sicily.²⁶⁵ Admittance to this highly supervised guild required the surety of five individuals or, for a slave, that of his master.²⁶⁶ We can conclude with assurance that a good number of these silk tradesmen were *ethnikoi* of unfree status, but also that a substantial number of aristocratic households were involved, through their dependents, in this extremely lucrative activity.

Finally, two guilds specialized in the sale of cloth and apparel: the *vestiopratai* and the *prandiopratai*. Only the first held the right to sell the product of local silkworks. They were merchants, barred from manufacturing clothing and apparel themselves, except for their own use, just as the *serikarioi* were barred from commercializing their production. The *vestiopratai* obtained their stock from the *serikarioi*, and, to a lesser

²⁶⁰ See Simon, “Die byzantinische Seidenzünfte,” 27–33.

²⁶¹ *EB*, 6.2, 5.

²⁶² See Simon, “Die byzantinische Seidenzünfte,” 34–44; Muthesius, “Silk Industry,” 35–36.

²⁶³ *EB*, 8.6, 8.

²⁶⁴ *EB*, 8.1, 3, 4, 9.

²⁶⁵ *EB*, 8.7, 10, 12; Choniates, 73–76, in which only embroiderers are mentioned with respect to Corinth; see the analysis of the other sources in Jacoby, “Silk,” 462 n. 54.

²⁶⁶ *EB*, 8.13.

extent, from certain *archontes*.²⁶⁷ In addition to this allocation of roles, the prefectural regulations sought above all to impose a control on the *vestiopratai* with respect to sales to foreigners (τοῖς ἔθνεσι) or to all persons outside Constantinople (τοῖς ἔξωθεν), who might purchase these goods with the intent of exporting them.²⁶⁸ The “imperial monopoly” was at issue here. Declaration was required of any purchase by the *vestiopratai* of a garment valued in excess of 10 nomismata, so that the eparch could supervise its resale;²⁶⁹ foreigners were not allowed to purchase silks whose export was prohibited, and they were required to have the prefectural seal applied to authorized garments, intended solely for their own use, which had to be tailored in Constantinople.²⁷⁰ The testimony of Jacob the “new convert” around 630 shows that fraudulent exports were both common and profitable;²⁷¹ that of Liutprand, a half century after the publication of the *Book of the Eparch*, indicates that these controls were futile, if it was indeed the case that one could find the same silk cloth in Venice that was in principle barred from export out of Constantinople.²⁷²

The *prandiopratai*, differentiated from the *vestiopratai*, were the buyers and resellers of manufactured goods imported from “Syria” in its broader sense—that is, from the Muslim world—and most often mediated by way of Antioch and its port city Seleukeia Pieria. The articles might be silk, but there were other fabrics as well; their common trait was that they were Arab specialties: undergarments, kaftans, wide breeches, clothing of “sea wool.”²⁷³ According to customary practice, the Arab merchants resided in a city hostelry for three months, during which they could trade their imported goods with the *prandiopratai*, as well as with Syrians resident in Constantinople for more than ten years,²⁷⁴ and *archontes* seeking to purchase supplies for themselves.

The Privilege of the Archontes and the Monopoly of the State Even without taking into account the risk of fraud, negligence, or the venality of prefectural agents, this system of manufacture and of commercialization, ostensibly so coherent and segmented, had

²⁶⁷ *EB*, 4.2, 7.

²⁶⁸ *EB*, 4.1, 4.

²⁶⁹ *EB*, 4.2.

²⁷⁰ *EB*, 4.8.

²⁷¹ *Doctrina Jacobi*, 5.20 (pp. 216–17, 238): the wealthy man—a merchant or an *archon*—who employs Jacob sends him to Carthage to trade illegally in garments, certainly of silk. In so doing, the man claims to be following the example “of Asmikto and others,” individuals who had devised this method of gaining wealth.

²⁷² Liutprand, *Legatio*, in *Die Werke Liudprands von Cremona*, ed. J. Becker (Hannover, 1915), 54–55 (pp. 204–5), referring to Venice and Amalfi.

²⁷³ *EB*, 5.1–2. The terms used require special study. Regarding the silk cloth manufactured in Arab countries, see Ibn Hawqal, *Configuration de la terre*, 2:157, 199, 254, 293, 331, 335, 354–55, 371, 422, 447; cf. A. Guillou, “La soie du katépanat d’Italie,” *TM* 6 (1976): 70–71. See also the treaty struck in 969/70 between Nikephoros Phokas and the amir of Aleppo, which makes mention of customs dues on the imports and exports of raw silk and silk cloth; cf. M. Canard, *Histoire de la dynastie des H’amdani-ides de Jazira et de Syrie* (Paris, 1953), 1:835.

²⁷⁴ *EB*, 5.2, 4–5. As usual, we are dealing with a purchase arranged by the guild as a whole. It was not unusual to come across Arab merchants in traditional costume in Constantinople: cf. *The Life of St. Andrew the Fool*, ed. L. Rydén (Uppsala, 1995), 66–67, 70–73 (lines 798–801, 876–90).

a number of fault lines and shadow areas that admitted encroachments by one specialty on another. It also discloses a disequilibrium between the *serikarioi*, who practically controlled the entire chain of production, and the others. Corporative and financial logic often clashed when the interests of the merchants of raw silk, the silk dressers, and the other artisans who had a practical interest in the consignments came up against the interests of individuals who had means sufficient to participate in these transactions.²⁷⁵ The same was true for *archontes* or other private individuals whose entry into the system was anticipated, but was subject to certain conditions. They had the right to manufacture silk for their own use (with the exception of certain types of cloth or clothing reserved for the emperor),²⁷⁶ to sell certain garments to the *vestiopratai* on the same terms as the *serikarioi*,²⁷⁷ and to obtain supplies directly from Syrian importers without the intermediation of the *prandiopratai*.²⁷⁸ At the same time, denunciations were leveled at the *metaxopratai* and the *katartarioi* who acted as front men for the *archontes* to ensure to them direct access to the market in raw silk.²⁷⁹ Here again, frequent references to the servile status of certain members of the silk guilds in any event reflect the presence of financial backers and suggest that the *archontes* not only represented a parallel channel, but that they also controlled a significant segment of the system of guilds itself.²⁸⁰ Prefectural regulation was intended not only to maintain production at a high level and protect the imperial prerogatives, but, to the extent possible, to safeguard the autonomy of a specialized craft industry both from the control of the “powerful” and from the small retail trade.

It is neither novel nor surprising to note that the Byzantine aristocracy took an interest in silk. In a number of provinces, notably in Greece and Calabria, the large provincial estates must have been directed toward the cultivation of silk;²⁸¹ aristocratic families often employed a portion of their manpower in weaving, as shown in the often-cited example of the widow Danelis/Danelina in the Peloponnese,²⁸² and this domestic production circulated as gifts or as merchandise. Dignitaries, on the occasion of the annual *roga* in particular,²⁸³ received silk cloth or garments from the emperor which they might hoard, but which they could also resell or donate to churches. These ar-

²⁷⁵ *EB*, 6.9; 7.2.

²⁷⁶ *EB*, 8. 2. The provision prohibiting “*archontes* and individuals” from manufacturing specific types of cloth suggests that they were allowed to manufacture others; it is with respect to this manufacture that they are authorized to purchase raw silk.

²⁷⁷ *EB*, 4. 2. It should probably be understood that they were reselling garments rather than manufacturing them for sale, which would have contradicted the other relevant provisions.

²⁷⁸ *EB*, 5.4.

²⁷⁹ *EB*, 6.10; 7. 1. One may nonetheless assume that these *archontes* had the right, as did the *serikarioi*, to purchase treated or untreated raw silk from the *metaxopratai* and the *katartarioi*.

²⁸⁰ On this point, see the conclusions of Simon, “Die byzantinische Seidenzünfte,” 40–44.

²⁸¹ A. Guillou, *Le Brébion de la métropole byzantine de Région (vers 1050)* (Vatican City, 1974); idem, “Production and Profits in the Byzantine Province of Italy (Tenth to Eleventh Century): An Expanding Society,” *DOP* 28 (1974): 91–109; idem, “La soie du katépanat d’Italie,” *TM* 6 (1976): 69–84; the estimates given by the author have often been held to be excessively high: Harvey, *Economic Expansion*, 149–50.

²⁸² *Vita Basilii*, 74; *Theophanes Continuatus*, 318; see Jacoby, “Silk,” 458–60.

²⁸³ Liutprand, *Antapodosis*, ed. Becker (as above, note 272), 6.10, pp. 157–58.

ticles, itemized and painstakingly described in wills and inventories—like pieces of goldwork—were assets in the same way as money.²⁸⁴ What most struck Benjamin of Tudela and other western travelers to Constantinople was that the inhabitants were dressed in silk clothing embroidered with gold.²⁸⁵ Silk, moreover, had multiple uses (whole garments, strips or edgings sewn on garments, hangings, cushions, book linings, etc.); it could be of higher or lower quality, that is, blended with cotton, wool, or linen to a greater or lesser degree.²⁸⁶ The demand for it was thus very strong, profit was assured, and it is understandable that the *archontes* would gradually have involved themselves in the system of production.

The state intervened on two levels: export and manufacture. Gifts of silk fabric or clothing held an important role in diplomacy and sometimes accompanied the conferral of court dignities to foreigners;²⁸⁷ measures were undertaken, as we have seen, to limit or prohibit the sale to foreigners of a certain number of products marketed by the *serikarioi* of Constantinople, and more or less destined for imperial largesse. There were, moreover, imperial factories, whose provisioning in raw material and whose structure we do not understand, but that occasionally had to fill large orders, such as the hundred *skaramangia* whose shipment to Bulgaria was envisaged in a treaty between Leo VI and Symeon.²⁸⁸ These silk garments, according to Constantine Porphyrogenetos, were highly sought after by the Khazars and other “Turks” or the “Ros,” who saw them not only as the trappings of wealth and power, but also as the insignia of the *basileia*, to the same extent as the *stemmata*; the articles were denied them.²⁸⁹ The *Book of the Eparch* lists in some detail the fabrics (*blattia*) and the garments (*skaramangia*), the manufacture of which, by virtue of their quality, color, or shape, was forbidden to the *serikarioi*, but reserved exclusively for the imperial workshops;²⁹⁰ it suggests, conversely, that the imperial stores could place orders for certain kinds of cloth with the *serikarioi*.²⁹¹ The underlying impression is that Byzantium was already engaged in a

²⁸⁴ P. Gautier, “Le typikon du Sébaste Grégoire Pakourianos,” *REB* 42 (1984): 43; idem, “La *Diataxis* de Michel Attaleiate,” 97–99, 129. See also S. D. Goitein, “A Letter from Seleucia (Cilicia),” *Speculum* 39 (1964): 299. Regarding silk garments as assets, cf. the *Rhodian Sea Law* [*Nomos Rhodion*], 40, Zepos, *Jus*, 2:103; S. D. Goitein, *A Mediterranean Society: The Jewish Communities of the Arab World as Portrayed in the Documents of the Cairo Geniza*, 1, *Economic Foundations* (Berkeley, 1967), 222–24, cited in Guillou, “La soie,” 82.

²⁸⁵ *Itinerary of Benjamin of Tudela*, 13; see also K. N. Ciggaar, “Une description de Constantinople dans le *Tarragonensis* 55,” *REB* 53 (1995): 119 (lines 18–19), 129 (line 13), and the letter mistakenly attributed to the count of Flanders, ed. P. E. Riant, *Exuviae sacrae Constantinopolitanae* (Geneva, 1878), 2:209.

²⁸⁶ Jacoby, “Silk,” 470–76, stresses, with good reason, the growth in demand and the variety of uses. Cf. Laiou, “Exchange and Trade,” 739–40.

²⁸⁷ Nikephoros, *Short History*, 162 (§ 86); A. Muthesius, “Silken Diplomacy,” in *Byzantine Diplomacy*, ed. J. Shepard and S. Franklin (Aldershot, 1992), 242.

²⁸⁸ Theodore Daphnopates, *Correspondance*, ep. 6 (of 924/925), 78–79; see also the Theban silk cloth that the sultan of Ikonion demanded from the emperor as annual tribute ca. 1195 (below, note 295).

²⁸⁹ *DAI*, chap. 13, 66–69.

²⁹⁰ *EB*, 8.1. A number of the terms in this list still require interpretation.

²⁹¹ *EB*, 8.11: “Whoever [of the *serikarioi*?] brings to the imperial store garments made outside [and not by himself] shall be flogged and shorn.” This provision seems to involve an imperial commission from a member of the guild, but J. Koder’s translation points to a different interpretation.

path of liberalization that came to fruition in the following century; it is clearly no longer a question of an “imperial monopoly” but, at most, exclusive rights over certain articles and the supervision of production and sale.

The *Book of the Eparch* is the sole source on the organization of the silk guilds; for all that, Constantinople was nonetheless far from being the sole center of production. Possibly as early as the ninth or the tenth century—more probably the eleventh to twelfth centuries—the sericultural regions (the Peloponnese, southern Italy)²⁹² and the islands situated on important commercial routes (Andros)²⁹³ manufactured certain kinds of dyed silk cloth. Important locations such as Thebes and Corinth,²⁹⁴ where specialized artisans seem to have been supplied, in part at least, by the Jewish community, and in which the Venetians appeared very early on, enjoyed a high reputation and received orders placed by the court.²⁹⁵

Everyday Fabrics and Clothing There is a relative dearth of sources regarding the manufacture and marketing of everyday linen or cotton cloth, which would nonetheless have been much more widely used than silk. The cultivation of flax is well attested, particularly in the Peloponnese²⁹⁶ and in the regions of the Strymon and the Pontos;²⁹⁷ certain place names (Linobrocheion: the place where linen is washed), give evidence of it, and it was subject to fiscal requisitions and therefore also to dispensation.²⁹⁸ The weaving of linen, alone or in combination with cotton or wool,²⁹⁹ and the manufacture of linen cloth and clothing, must have been widespread, partly in homes and partly in specialized workshops. The Constantinopolitan market, according to the chapter in the *Book of the Eparch* devoted to the *othoniopratai*, was abundantly furnished with finished products from all the empire’s productive regions, from Bulgaria and the Arab world, as well as from manufacturers in Constantinople. The latter were prohibited by

²⁹² With respect to the Peloponnese, the first reference appears in the passage of the *Vita Basilii*, 74, concerning the widow Danelis and thus the region of Patras: *Theophanes Continuatus*, 318 (lines 13–15); see also *Pseudo-Luciano, Timarione*, ed. R. Romano (Naples, 1974), 53–55 (§§ 5–6), which mentions, around the year 1110, silk garments manufactured in Boeotia and in the Peloponnese that are brought to the market of Thessalonike. For southern Italy, see Guillou, “Production and Profits,” and “La soie.”

²⁹³ On Andros, see E. Malamut, *Les îles de l’Empire byzantin, VIIe–XIIIe siècles*, 2 vols. (Paris, 1988), 1:210–12, 2:540ff; Jacoby, “Silk,” 460–62.

²⁹⁴ See Jacoby, “Silk,” 462–500.

²⁹⁵ Haldon, *Three Treatises*, 112 (lines 289–92); Niketas Choniates, 461: around 1195, the Seljuk emir of Ikonion demanded annual tribute of precious metal and “forty of those pieces of silk that are provided to the emperor by Thebes of the Seven Gates.”

²⁹⁶ *Vita Basilii*, 74, *Theophanes Continuatus*, 318 (among the gifts offered by the widow Danelis). Regarding clothing in general, see Harvey, *Economic Expansion*, 182–86.

²⁹⁷ Cited in *EB*, 9.1 together with the town of Kerasous (in the Pontos Polemoniakos), a town of minor importance, but which might have been an outlet for the linen trade.

²⁹⁸ *Lavra*, 1: no. 48 (line 41); E. Vranouse, Βυζαντινὰ ἔγγραφα τῆς μονῆς Πάτμου (Athens, 1980), 1: no. 6 (line 55).

²⁹⁹ The best attestation appears in the Prodromic poems: *Poèmes prodromiques*, 41–42, 49. Regarding the cultivation of cotton, see Lefort, “Rural Economy,” 252.

regulation from exhibiting these articles for sale at their workshops, but they could carry their products on their shoulders and sell them at the forum on market days.³⁰⁰ The same rule, the provision affirms, applied to linen towel makers (σάβανον) and all importers. The *othoniopratai* were subject to few constraints, with the exceptions of forming a buying consortium for consignments³⁰¹ and purchasing products imported by foreign merchants.³⁰² The *vestiopratai* were among the clients of the *othoniopratai* for linen linings of silk garments or for linen and cotton blends in certain garments.³⁰³

Provisioning

Provisioning held a decidedly special place in the urban economy as a whole: the population dedicated to it the bulk of its resources—the poor in particular, whose first and sometimes sole concern was to feed themselves.³⁰⁴ In addition, the problem of securing food, relatively simple for small towns that lived in symbiosis with their rural environment, became more complicated with respect to larger cities; there, the municipal authorities had to ensure uninterrupted provisioning from a more broadly defined “region,” particularly so in the case of a *megapolis* such as Constantinople, in which imports traveled from longer distances, and where social and political stability depended in great measure on the capacity of the state to avoid shortages and excessive price fluctuations. There were thus two variables: the number of inhabitants that had to be fed (which again sets the capital apart from the other urban centers) and the vagaries of circumstances, which tended to diversify alimentary demand and the nutritional regimen within a single population.

The Alimentary Regimen As was true throughout the Mediterranean basin until the nineteenth century, rye (which successfully withstands cold) and millet (a component of peasant gruels) ranked second to barley, (which grows rapidly, but has little nutritive value), and hard or soft wheat.³⁰⁵ One should also mention rice, introduced quite early

³⁰⁰ *EB*, 9.1, 6–7.

³⁰¹ *EB*, 9.3: “Let all the members of the guild make a contribution at the moment of purchase, each according to his means, and let the distribution be made in the same manner” [i.e., proportional to each member’s contribution].

³⁰² *EB*, 9. 6. The example chosen is that of the Bulgarians; the purchase must have been made collectively.

³⁰³ *EB*, 9.1: λόγῳ ἐνδυμάτων τῶν βαμβακίνων χιτῶνων, an expression that is difficult to interpret. A recent article by M. Gregoriou-Ioannidou (“Μια παρατήρηση στο Επαρχικό Βιβλίο για τους βεστιοπράτες,” *Byzantiaka* 13 [1993]: 25–35), provides several examples of an assimilation of βαμβάκινο with βομβύκινο (= made of silk), which would accord better with the specialization of the *vestiopratai* and with the manufacture of linings; it is nonetheless tempting to draw a parallel with the λινόβαμβάκινα ἱμάτια—clothes of a cotton and linen blend—that Theodore Prodromos mentions (*Poèmes prodromiques*, 1.93, p. 32).

³⁰⁴ See E. Patlagean, *Pauvreté économique et pauvreté sociale à Byzance, 4e–7e siècles* (Paris, 1977), 36–53 (for the problems of alimentation strictly speaking).

³⁰⁵ Among the numerous studies, the following warrant particular mention: F. C. Bourne, “The Roman Alimentary Program and Italian Agriculture,” *TAPA* (1960): 43–75; E. Ashtor, “Essai sur l’ali-

in lower Mesopotamia and in Egypt; its spread into Byzantium occurred no earlier than the tenth century, and it remained an expensive commodity.³⁰⁶ With the exception of the traditional Roman “biscuit” mentioned in military or monastic sources, which had the advantage of keeping well and was eaten after being reheated or soaked, the texts usually distinguish three grades of bread: (1) the *artos katharos*, bread made of more or less finely sieved wheat flour; (2) *mesos* or *mesokatharos artos*, bread made not exclusively of wheat flour; and (3) *ryparos artos*, a low-quality bread made of bran (*pityrites*) or barley (*krithinos*).³⁰⁷ We can estimate the daily bread ration of the early period: the ration was set by Valentinian at 36 ounces (980 g) with respect to the civil *annona*,³⁰⁸ and reckoned to equal 3 or 4 pounds (between 980 and 1,300 g) with respect to the military *annona*.³⁰⁹ These numbers should be used with caution, since the *annona* distributions were not calculated on the basis of the needs of the individual beneficiaries alone and often represented a sort of payment in kind. The most reasonable estimate approximates 42 modioi of wheat per person per year, or 3.5 modioi per month (24 kg if we use the equivalent of 6.8 kg to 1 Roman modios), or slightly less than 1 kg of bread per day.³¹⁰ This represents a maximum, given the caloric value of such a ration in a diet that was, as we shall see, quite diversified. We should not rule out the possibility that the crisis of the seventh century promoted an evolution in eating habits and lowered somewhat the position of bread in the urban diet. With respect to the twelfth century, the most plausible text provides for a daily allocation of 850 g of bread.³¹¹

To judge by sources that describe the transit of whole herds through Pylai (in Bi-

mentation des diverses classes sociales dans l'Orient médiéval,” *Annales ESC* 23 (1968): 1017–53; J. André, *L'alimentation et la cuisine à Rome* (Paris, 1961). With respect to Byzantium in the strict sense: Ph. Koukoules, “Βυζαντινῶν τροφαὶ καὶ ποτά,” *ΕΕΒΣ* 17 (1941): 3–112, repr. in idem, *Βυζαντινῶν βίος καὶ πολιτισμός* (Athens, 1952), 5:9–135. E. Kislenger, s.v. “Ernährung,” B. “Byzantinisches Reich,” in *Lexikon des Mittelalters* 3:2171–74. Cf. C. Morrisson and J.-C. Cheynet, “Prices and Wages in the Byzantine World,” *EHB* 822–29, Tables 5 and 6. On the production of alimentary commodities, see Lefort, “Rural Economy,” 248ff.

³⁰⁶ See M. Canard, “Le riz dans le Proche-Orient aux premiers siècles de l'Islam,” *Arabica* 6 (1959): 113–31, reprinted in idem, *Miscellanea Orientalia* (London, 1973), art. 20. See below, 440, note 321.

³⁰⁷ Koukoules, *Bíos*, 5:12–35; cf. Patlagean, *Pauvreté économique*, 42, 51–53. For soldiers, see in particular the sources assembled in T. Kolias, “Essgewohnheiten und Verpflegung im byzantinischen Heer,” *Byzantios: Festschrift für Herbert Hunger zum 70. Geburtstag*, ed. W. Hörandner et al. (Vienna, 1984), 193–202.

³⁰⁸ *CTh* 14.17.5 (Rome, 369): the emperor modified the ration, which had previously been 50 ounces (1.350 kg).

³⁰⁹ See the figures given by J. Gascou, “La table budgétaire d'Antéopolis,” in *Hommes et richesses*, 1:290 and n. 48.

³¹⁰ This is the estimate of E. Stein, reduced, excessively in my opinion, by L. Foxhall and H. A. Forbes, who propose the figure of 2.6 modioi per month (= 17.7 kg), or 580 g per day which I believe to be too low: L. Foxhall and H. A. Forbes, “Σιτομετρεία: The Role of Grain as a Staple Food in Classical Antiquity,” *Chiron* 12 (1982): 41–90, in particular 71; followed by A. E. Müller, “Getreide für Konstantinopel: Überlegungen zu Justinians Edikt XIII als Grundlage für Aussagen zur Einwohnerzahl Konstantinopel im 6. Jahrhundert,” *JÖB* 43 (1993): 1–20, esp. 13–15. See also J. Durliat, *De la ville antique à la ville byzantine: Le problème des subsistances* (Rome, 1990), esp. 113 and nn. 194–95.

³¹¹ See below, 441.

thynia) and their passage through the capital to specialized markets (the *Strategion*, the Forum Tauri),³¹² meat was not a luxury. Setting aside fowl and game, which came from the nearby countryside, one may reckon that beef, by virtue of the use of oxen in agriculture as draft animals, was much less important in the meat diet than were sheep or goat, and that pork held the same position in the seventh to twelfth centuries that it did in the Roman world. The progressive Islamization of the Near East did not make its use disappear or even diminish in Byzantine territories. Most pork was transformed into cured meat, which we find in the rations of the soldier on campaign,³¹³ and which in Constantinople was sold primarily by the neighborhood “grocers” (*saldamarioi*).

The role of fish in the diet is clearly a function of geographic circumstances, which were especially favorable to Constantinople.³¹⁴ Fish compensated for a number of wheat shortages in the capital, and to the extent that fishermen had access to the sea near the city’s ramparts, where they could find an abundance of mackerel and small tuna, the besieged city never completely starved.³¹⁵ There was also expensive fish for consumption by the wealthy, offered as gifts or eaten at the better tables (sturgeon and bass, freshwater fish, or fish from briny waters or fishponds, the eggs of which were highly prized), and crustaceans, shellfish, and mollusks, all of which were widely available in Constantinople.³¹⁶

Texts consistently distinguish between fresh vegetables of local or regional production (*lachana*) and dried pulses, most often legumes (broad beans, chick peas, lentils); dried for winter consumption, pulses kept well, and, since they could be brought in from some distance, they are sometimes mentioned in the cargoes of the boats that provisioned Constantinople.³¹⁷ It has long been thought that fresh vegetables were a luxury item, but a recent study has noted the importance of small urban garden plots and the advantages that accrued from rapid crop rotation under this type of cultivation.³¹⁸ In a city such as Constantinople, underdeveloped areas and disused cisterns

³¹² Leo of Synada, ep. 54 to Basil II, ed. M. P. Vinson, *The Correspondence of Leo, Metropolitan of Synada and Syncellus* (Washington, D.C., 1985), 86–91; Ps.-Kodinos, *Patria*, 2:46a, ed. Preger 175.

³¹³ See, for example, for the early period, *CI* 12.37.1: on one day of every three, soldiers received salt pork (*laridum*, *lardin*), which had to be left to soak for several days before eating, to remove some of the salt (Maurice, *Strategikon*, 7 A.10 = Leo VI, *Taktika*, 13.12. See T. Kolias, “Essgewohnheiten.”

³¹⁴ See below, 449–50.

³¹⁵ Theophanes, 397.

³¹⁶ See Koukoules, Βίος, 5:331–43; L. Robert, “Les *kordakia* de Nicée, le combustible de Synnada et les poissons-sciés: Sur des lettres d’un métropolite de Phrygie au Xe siècle: Philologie et réalité,” *JSav* (1961): 97–166; (1962): 5–74; J. André, *L’alimentation et la cuisine à Rome* (Paris, 1961), esp. 97–116; F. Tinnefeld, “Zur kulinarischen Qualität byzantinischer Speisefische,” in *Studies in the Mediterranean World: Past and Present* 11, Collected Papers Dedicated to Kin-Ichi Watanabe, Hitotsubashi University (Tokyo, 1988): 155–76.

³¹⁷ J. Durliat and A. Guillou, “Le tarif d’Abydos (vers 492),” *BCH* 108 (1984): 581–98; G. Dagron, appendix, in G. Dagron and D. Feissel, “Inscriptions inédites du Musée d’Antioche,” *TM* 9 (1985): 451–55.

³¹⁸ J. Koder, *Gemüse in Byzanz: Die Frischgemüseversorgung Konstantinopels im Licht der Geoponika* (Vienna, 1993); summarized in idem, “Fresh Vegetables for the Capital,” in Mango and Dagron, *Constantinople and Its Hinterland* (as above, note 179), 49–56. In addition to local produce, the gourmets of Constantinople especially prized lettuces from Olympos in Bithynia; cf. J. Darrouzès, *Epistoliers byzan-*

were numerous and favored the planting of gardens, notably between the wall of Constantine and the wall of Theodosios. It was enough, moreover, to have access to a zone of 2 or 3 km outside the city for the capital to be self-sufficient in fresh vegetables at a reasonable price. During the terrible siege of 626, the inhabitants of the capital took advantage of lulls in the fighting to go pick produce in these suburban gardens.³¹⁹

Following the old Roman tradition, olive oil—which, however, is not accorded the honor of inclusion in the *Book of the Eparch*—accompanied all dishes, as did *garum*, the result of the liquid decomposition of fish with the addition of salt and aromatic plants: the ambassador Liutprand of Cremona complains of it. He finds equally indigestible “Greek wine,” to which pitch, resin, and gypsum were added, as components of its manufacture and for their keeping powers. Sweet-smelling plants attenuated the bitterness of this acidic, syrupy wine, whose alcohol content was quite low, and a good measure of lukewarm water was added to it. In summer, vinegar diluted with water was consumed as a refreshment (*posca*, *phouska*, *oxykraton*).³²⁰

In the few texts that provide such descriptions, the diet of the urban population seems quite diverse and balanced. I shall not dwell on the menu of the emperor on campaign, which, in addition to wine and olive oil of the first quality, provides for dried fruit or vegetables (white beans, lentils, pistachios, and almonds) as well as rice (*oryzin*), cured pork, salt meat, livestock for milk and for slaughter, cheese, numerous varieties of salted fish, and various condiments and seasonings.³²¹ The *typika* of the eleventh and twelfth centuries, which describe dietary rules for the midday meal in the refectory, are undoubtedly more representative. During Lent, the strictest diet provided for pulses cooked in water, possibly a second course of fresh vegetables, and a few “small fruits,” with hot water seasoned with cumin as a beverage. To improve this austere everyday fare when the liturgical calendar so permitted, one or both of the vegetable dishes were cooked with olive oil; shellfish or crustaceans or even fish—should a pious Christian have made a gift of one to the monastery—were added to the menu; there was wine as well, drunk either from a small goblet or from the large *krasobolion*, which served each monk as a unit of measure and as a drinking vessel.³²² The monastic diet was thus based on vegetables but usually comprised three dishes: two of vegetables

tins du Xe siècle (Paris, 1960), 324, 328, 329; J. Lefort, “Les communications entre Constantinople et la Bithynie,” in Mango and Dagron, *Constantinople and Its Hinterland* (as above, note 179), 210.

³¹⁹ *Chronicon Paschale*, 1:717; *Theophanes Continuatus*, 337–38; see other references in Koder, *Gemüse*. In the event of siege, when bread was lacking there were still vegetables (*Chronicle of Joshua the Stylite*, [*Incerti auctoris Chronicon Pseudo-Dionysianum vulgo dictum*], ed. J.-B. Chabot [Louvain, 1949], 196–97, with respect to Edessa); famine became a real threat only when there was no product available to substitute for wheat and, in particular, no more vegetables (*Miracles de Saint Démétrius*, 1:103–6, Miracle 1.9, § 73, with respect to Thessalonike).

³²⁰ *Legatio*, 1, 11, pp. 176, 181–82; T. Weber, “Essen und Trinken im Konstantinopel des 10. Jahrhunderts nach den Berichten Liutprands von Cremona,” in *Liutprand von Cremona in Konstantinopel: Untersuchungen zum griechischen Sprachschatz und zu realienkundlichen Aussagen in seiner Werken*, ed. J. Koder and T. Weber (Vienna, 1980), 71–99; E. Kislinger, “Φοῦσκα und γλήχων,” *JÖB* 34 (1984): 49–53.

³²¹ Haldon, *Three Treatises*, 102–5 (text), 200–203 (notes).

³²² Cf. P. Gautier, “Le typikon de la Théotokos Evergétis,” *REB* 40 (1982): 32–43. For each monk seated at the refectory, a monk poured hot water into the *krasobolion* (in which the measure of wine had already been poured).

(dried and fresh) sprinkled with oil, and one of shellfish or seasonal crustaceans, salted fish, cheese or eggs (on Wednesdays and Thursdays), or fresh fish (on Saturdays and Sundays). The food was accompanied by a good measure of wine diluted with hot water.³²³ The regulations of the imperial foundation of Christ the Savior Pantokrator provided for the daily distribution of each of its fifty patients and to the eleven assigned to their care of one loaf of white bread of approximately 850 g, 210 g of pulses, 210 g of fresh vegetables (but only 105 when peas comprised the pulse course), two onions and 1 nomisma trachy—a considerable sum—to purchase wine (which was indispensable) and any other supplements (notably fish or meat). The sick and infirm had a more frugal diet: 715 g of bread, 70 g of pulses, 44 g of cheese, 24 g of oil, and a demi-liter of wine.³²⁴ Satirical literature offers a somewhat different but decidedly complementary picture. The Prodomic poems delight in presenting “fellows with empty stomachs”—the half-starved writers who envy the easy life and refined food of Constantinopolitan artisans; or the henpecked husbands who disguise themselves as beggars to get their wives to give them broth with nice bits of meat; or the monks of no rank whose only sustenance is rotted tuna or *hagiozoumin*, whose only drink is vinegar, and who gaze with envy at the delicious and varied dishes served to the *higoumenoi*.³²⁵

Developments over Time The late Roman Empire had perfected a system of regulation to avoid shortages or excessive price variations.³²⁶ In cities of some importance, a municipal fund (the *sitonikon*) served to purchase wheat, which was kept in a public granary, and sold, in the event of need, at moderate prices. In Constantinople, where this mechanism existed but was insufficient, it was the imperial administration itself that, following the Roman model, intervened: by imposing levies on producers, requisitioning a fleet for long-distance transport, ensuring the stocking of enormous imperial granaries and the distribution—for free or at a reduced price—of daily bread rations.³²⁷

³²³ P. Gautier, “Le *Typikon* du Christ Sauveur Pantocrator,” *REB* 32 (1974): 46–59, for the regimen of the monks; see also E. Jeanselme and L. Oeconomos, “La règle du réfectoire du monastère de Saint-Nicolas de Casole près d’Otrante (1160),” *Bulletin de la Société française de l’Histoire de la Médecine* (1922), translating and commenting on A. Dmitrievskii, *Opisanie liturgicheskikh rukopisei khrareshchikh-sia v bibliotekakh pravoslavnogo vostoka*, vol. 1.3 (Kiev, 1895), 818–23. A full bibliography appears in R. Volk, *Gesundheitswesen und Wohltätigkeit im Spiegel der byzantinischen Klostertypika* (Munich, 1983); see also M. Dembinska, “A Comparison of Food Consumption between Some Eastern and Western Monasteries in the 4th–12th Century,” *Byzantion* 55 (1985): 431–62.

³²⁴ Gautier, “Le *Typikon* du Christ Sauveur Pantocrator,” 18–19. Jeanselme and Oeconomos estimate that this regimen would have totaled 3,300 calories for invalids who were ambulatory, and 2,500 for the infirm.

³²⁵ *Poèmes prodromiques*, in particular 36 (I, verses 240–67), 54–70 (III, verses 147–439). According to the recipe given by Theodore Prodromos, the *hagiozoumin*, a Lenten dish, was a type of clear broth, to which were added a few onions, three drops of oil as “baptism,” and marjoram for flavoring, before it was poured onto dried bread, 57, 61 (I, verses 213–16, 290–301).

³²⁶ On the provisioning of the cities in the late Roman Empire, see G. Rickman, *The Corn Supply of Ancient Rome* (Oxford, 1980); Durliat, *De la ville antique*.

³²⁷ On Roman granaries and their storage capacity, see G. Rickman, *Roman Granaries and Store Buildings* (Cambridge, 1971); C. Virlouvet, *Tessera frumentaria: Les procédures de la distribution du blé public à Rome à la fin de la république et au début de l’empire* (Rome, 1995), 88–117; Mango, *Développement urbain*, 40 and nn. 19–20; Müller, “Getreide für Konstantinopel,” 5–8. Through Edict 13.8 (538/539)

It was a matter not of coming to the aid of the poor, but rather of guaranteeing the subsistence of the citizenry as a whole.

This complex and burdensome annony system collapsed when Egypt was conquered by the Persians and subsequently occupied by the Arabs. In 618, shipments of Egyptian grain stopped for good, and Constantinople was forced to obtain its provisions—for better or for worse—from its large hinterland: from Thrace, Macedonia, and Greece, on one side, and from Bithynia, the Pontos, and Asia Minor, on the other.³²⁸ How could such an upheaval have taken place without provoking lasting famine? First, because there were far fewer mouths to feed, particularly in Constantinople, where an abrupt demographic decline continued until the middle of the eighth century.³²⁹ The emperors, uncertain of the capital's future, sometimes urged the population to leave: in 715, foreseeing an Arab siege, Anastasios II decreed that only inhabitants in a position to purchase and stock food for a period of three years would be able to stay.³³⁰ The ancient economic infrastructures—ports and granaries in particular—diminished or disappeared.³³¹

But demography was only one element of the response. With respect to provisioning, as in other sectors of the urban economy, we pass from a system in which the state and the municipal administration made efforts to satisfy the needs of their citizens in a spirit of equality, to a system in which charitable foundations or associations took on the task of redistributing the wealth of the richer to the poorer. Charity became a principle of public management, and the church progressively took the place of the state in a role that was no longer one of control and organization, but rather one of

of Justinian, we know that at that time the Egyptian ἐμβολή was delivering 8 million *artabai* of wheat to the capital (the unit of measure is not given, but it is certain that it is *artabai* that are at issue). Mango (*Développement urbain*, 37–38) relies on R. P. Duncan-Jones (“The Choenix, the Artaba, and the Modius,” *ZPapEpig* 21 [1976]: 43ff) and on Rickman (*Corn Supply*, 233) to arrive at a “great *artaba*” of 4.5 modioi, whereas Durliat, Gascou, and Müller (see above, notes 309 and 310) adopt the more standard *artaba* of 3 modioi, which gives an annual *embole* of 24 million modioi = 163,000 metric tons. This would suggest, assuming a loss of 20% (from misappropriation, rotting, destruction by rodents: cf. Müller, “Getreide für Konstantinopel”), an urban population exceeding 500,000 inhabitants. A chapter of Peter the Patrikios (*De cer.*, 2:51) describes the ceremony to be observed when the emperor inspects the granaries of the capital.

³²⁸ On wheat provisioning after the 6th century, see J. L. Teall, “The Grain Supply of the Byzantine Empire, 330–1025,” *DOP* 13 (1959): 83–139; and, more recently, Magdalino, “The Grain Supply of Constantinople.” See also Hendy, *Studies*, 44–54, 559.

³²⁹ See above, 390. It is estimated that the population dropped from 500,000 inhabitants to approximately 40,000 (Mango *Développement urbain*, 54) or 70,000 (Magdalino, *Constantinople médiévale* [Paris, 1996], 18).

³³⁰ See Theophanes, 384, who adds that the emperor ordered that the granaries of the palace be filled with all sorts of foodstuffs; see also Nikephoros, *Short History*, 116 (§ 49). Treaties on strategy generally advise the expulsion, in times of siege, of inhabitants who do not have reserves at their disposal.

³³¹ Of the five public granaries mentioned in the 5th-century *Notitia urbis Constantinopolitanae*, only one remained, that of Lamia; port capacity diminished appreciably with the abandonment of the harbor of Theodosios and the transfer of maritime trade to Neorion; cf. Mango, *Développement urbain*, 40, 45, 53–55; J. F. Haldon, “Comes Horreorum—Komès tès Lamias,” *BMGS* 10 (1986): 203–9.

relief and compensation.³³² In the institutional void that characterized the period, the archbishop of Thessalonike defended the interests of the population against the speculative activities of the notables;³³³ the patriarch of Alexandria took in the refugees from Palestine, conducted a census of the 7,500 indigents of the city, and, in order to feed them, borrowed 10 kentenaria of gold from the wealthy citizens whose business seemed to be prospering; the representative of the state, the *patrikios* Niketas, to the contrary, sought to requisition the goods of the church for distribution as *annona*.³³⁴ In Constantinople as well, the state renounced its quasi-monopoly on the provisioning of wheat, and new practices were established—less rigid and more effective—based on decentralization and private initiative. As Paul Magdalino has shown, the reduction in the capacity of the port was in part compensated by the proliferation—on the Bosphoros, the Golden Horn, and the Marmara—of “ship’s planks” (*skalai*) (planks used for the landing and loading of the ships), small wooden jetties owned by individuals or by religious institutions.³³⁵ The great public cisterns, now transformed into gardens, were replaced by a very large number of reservoirs managed by small monastic communities or households.³³⁶ This new model of economic management led to the establishment of diversified networks and multiple centers. The Constantinopolitan or Thessalonikan *oikoi* were simultaneously agents of economic administration and social redistribution in the urban environment, remedying a poverty that was henceforward viewed as structural.³³⁷

Under this new system, the massive intervention by the state ended. The emperor intervened only occasionally to limit price increases or to remedy the rather rare famines attributable to sieges or to unfavorable climatic conditions.³³⁸ Under Constantine

³³² On this transformation, cf. Patlagean, *Pauvreté économique*; Dagron, “Ainsi rien n’échappera à la réglementation”; A. E. Laiou, “The Church, Economic Thought and Economic Practice,” in *The Christian East, Its Institutions and Its Thought*, OCA 251 (Rome, 1996), 435–64.

³³³ See the passages in the Miracles of St. Demetrios, cited below, note 338.

³³⁴ *Vie de Jean de Chypre*, chaps. 1, 6, 11, pp. 347–48, 350–52, 358–59 (text); 444–45, 449–50, 458–60 (trans).

³³⁵ Magdalino, “The Grain Supply of Constantinople,” 39–46; regarding the *skalai* under Michael VII, see Attaleiates, *Historia*, 277–78.

³³⁶ In the middle of the 10th century, Theodore, the metropolitan of Kyzikos, had a reservoir built in his house and asked the “count of the waters” to furnish water to him at a modest price: Sp. Lambros, “Ἐπιστολαὶ ἐκ τοῦ Βιενναίου κώδικος Phil gr. 342,” *Νέος Ἑλλ.* 19 (1925): 276, 293, cited by Mango, *Développement urbain*, 56–57.

³³⁷ On the *oikoi*, see above, 419–21.

³³⁸ Separate study should be made of the three passages in the Miracles of St. Demetrios with different dates (586, ca. 610, 676–678) that describe the troubles of Thessalonike besieged and blockaded by the Slavs. The city could no longer live solely off its hinterland, and, whether by virtue of the emperor’s decision or through a miracle of St. Demetrios, the city benefited, variously, from direct aid from Constantinople, from the diversion of merchant ships sailing toward the capital, or from provisions coming from different areas, Sicily in particular. The situation described (which is, moreover, not precisely identical in the three texts) straddles two periods. Already, this was no longer the period of annony requisitions, since the *naukleroi*, even if they were called to Constantinople, remained apparently free to go wherever they could do “good business,” and their cargo included, in addition to wheat, various other products. To alleviate the shortage, envoys went forth to seek out

V, produce was plentiful in the markets of Constantinople thanks to the fiscal policy of the sovereign, who forced the peasants to sell more by imposing taxes that were heavier and now paid in specie.³³⁹ During a period that came to last more than two centuries, the chroniclers never spoke of serious famine, and they boasted of the economic vigilance of Theophilos, who systematically made the rounds of the markets, examined the quality of the products sold, and inquired as to their origin and their prices.³⁴⁰ We have already arrived at the economic system of free competition—supervised rather than controlled—that the *Book of the Eparch* describes.

The tenth-century emperors evidently had far fewer possibilities for intervention than did their predecessors in the sixth century. When a great famine arose during the winter of 927–928, the result of 120 consecutive days of frost, Romanos Lekapenos could only set the example of charity to the poor and take measures to impede the dispossession of peasant landholders.³⁴¹ When an unending rain provoked another climatic catastrophe in 1037, processions were organized and John Orphanotrophos caused as much grain as possible to be brought in from the nearby regions of the Peloponnese and Hellas.³⁴² It was, nonetheless, always possible to bear down on prices and encourage or check speculation. In 960, when a shortage forced up the price of wheat and barley (the former was selling at 4 modioi to the nomisma, the latter at 6), Joseph the Parakoimomenos, while sending men “to the East and to the West,” to urge on the merchant ships, prohibited small merchants (*sitokapeloï*) from stockpiling wheat and speculating on the price rise.³⁴³ Three years later, when Constantinople began to take the side of Nikephoros Phokas, the same minister threatened the populace in revolt that he would arrange that the amount of wheat bought with one nomisma might be tucked in the fold of a garment.³⁴⁴ During a shortage resulting from May winds that dried up the fields and vineyards in Honorias and Paphlagonia, the people of the capital blamed Emperor Nikephoros Phokas for not having intervened effectively, accused his brother Leo of having ties to speculators (*sitokapeloï*), and recalled the example of Basil I, who, seeing the people cast down and having learned that

new markets, but the provisioning remained very much controlled by civil servants: the count of Abydos sought to divert to the capital from nearly everywhere the boats that were under attack by the Slavic corsairs, and he suspected the eparch of Illyrium (otherwise called the eparch of Thessalonike), of drawing them to himself. Lemerle, *Miracles de Saint Démétrius*, 1:100–108, 198–221 (text); 2.120–36 (commentary), nos. I.8 and 9, II.4. These texts are analyzed by Durliat, *De la ville antique*, 390–406, whose conclusions I do not share in their entirety. Cf. Laiou, “Exchange and Trade,” 701–2.

³³⁹ Theophanes, 419, 443; Nikephoros, *Short History*, 160 (§85); idem, *Third Antirrhetikos*, PG 100:513–16. See Oikonomides, *Fiscalité*, 35, who believes that, beginning with the reign of Constantine V, the land tax was required to be paid in gold coin.

³⁴⁰ *Theophanes Continuatus*, 87.

³⁴¹ *Theophanes Continuatus*, 417–18. For trade in cereals, see Laiou, “Exchange and Trade,” 719–20.

³⁴² Skylitzes, 400.

³⁴³ *Theophanes Continuatus*, 479; Ps.-Symeon, in *ibid.*, 759. After a year, we see the price return to wheat was judged to be the more normal level of $\frac{7}{8}$ modios of wheat per nomisma and of 12 modioi for barley.

³⁴⁴ Skylitzes, 257.

wheat was selling at 2 modioi per nomisma, was said to have reacted with dispatch to put wheat on the market at 12 modioi per nomisma.³⁴⁵

These variations suggest an average price level for the tenth century and the first half of the eleventh century: no longer 30 modioi of 12.8 kg per nomisma, as was true when Egypt and Africa were still part of the empire, but around 12 modioi;³⁴⁶ they also suggest a limit, much more fluid, above which the emperor was expected to intervene, if he could, to obtain wheat and to sell it at low cost, thus checking speculation.³⁴⁷ The same system prevailed during the period following, but began to unravel as monetary “devaluations” were added to the natural fluctuation of the market. It may be this fact that explains an attempt under Michael VII (1071–78) to retake the reins of the market in wheat, described in malicious terms by the historian Michael Attaleiates. Having learned that carts were arriving in the *kastron* of Rhaidestos—the trade outlet for Constantinople for goods from Thrace and Macedonia—to sell wheat unrestrictedly to individuals and agents for the monasteries and Hagia Sophia, Nikephoritzes, the logothete of the *dromos*, ordered a kind of grain exchange (*phoundax*) to be built outside the town center. There, producers were forced to come sell their wheat—at rock-bottom prices while paying high fees for the privilege—to professionals suspected of engaging in speculation (*sitokapeloï*), who in turn resold it at four times the purchase price. This “monopoly” on purchase and sale (which Attaleiates considered high-handed but in which we find echoes of ancient regulation) was thought to have made a wealthy man of Nikephoritzes, who leased the *phoundax* for a sum of 60 pounds in gold and caused a spectacular rise in the price of wheat. In fact, it is possible that the measure (which was rescinded under the subsequent reign) was intended less to set burdensome taxes than to impose controls over the market price and to prevent speculation by limiting the role of private intermediaries, foremost of whom were the churches and the monasteries of the capital.³⁴⁸

Bakers and Bread In Constantinople, where it was not easy to mill grain, much less to bake the dough without contravening the “laws of urbanism,”³⁴⁹ recourse to the

³⁴⁵ Skylitzes, 277–78.

³⁴⁶ Cf. J.-C. Cheynet, E. Malamut, and C. Morrisson, “Prix et salaires,” in *Hommes et richesses* (as above, note 37), 2:356–61; Morrisson and Cheynet, “Prices,” 830.

³⁴⁷ Later, John the Oxite, mentions, among the functionaries who are oppressing the peasants of his time, the “imperial merchants of grain and other fruits of the earth” (ed. and trans. P. Gautier, “Diatribes de Jean l’Oxite contre Alexis Ier Comnène,” *REB* 28 [1970]: 31), which calls to mind other mandatory levies at prices set by the state.

³⁴⁸ Attaleiates, 201–4. This passage should be linked with the attempt, which occurred during the same period and which proved equally fruitless, to transfer ownership of the *skalai* to the city or to the state from the monasteries and religious foundations that held them and undoubtedly derived substantial revenue from them (see below, note 378). Regarding the affair of Rhaidestos, see also Laiou, “Exchange and Trade,” 742–44.

³⁴⁹ The “laws of urbanism” impose rules regarding security and hygiene on the construction of ovens for urban bakeries, and do not make mention of household ovens; the sources confirm that even aristocratic households obtained their bread from the bakers: C. Saliou, *Le traité d’urbanisme de*

baker was a necessity. The bakeries supplied aristocratic houses;³⁵⁰ only large monastic communities had no need of the baker. The guild thus maintained its importance, even though the state's quasi-monopoly on grain supplies had come to an end, as had the distinction between the 120 (or 113) "private" bakeries and the 21 "public bakeries," in which the "state bread" was manufactured prior to daily distribution from the 107 local stalls (*gradus*).³⁵¹ Here again, the state's control had given way to liberalization, but certain structures endured. The widow Olympias at the beginning of the fifth century donated several buildings, including a bakery, to Hagia Sophia.³⁵² Attaleiates, in the eleventh century, similarly endowed his religious foundation with a bakery adjacent to a house converted to use as a hospice, the rent of which brought in the tidy sum of 24 nomismata per year.³⁵³ Undoubtedly, the enormous bread factories, which made use of an abundant dependent labor force and functioned, as needed, as penal servitude for fugitive slaves, were no longer to be found.³⁵⁴ A bakers' quarter, which housed the *artopoleia/artoprataia*, nonetheless continued to exist not far from the Port of Julian and the sole remaining granary, the *horreum Alexandrinum*, which had become the "granary *tes Lamias*."³⁵⁵ Within this nerve center of urban alimentation, sources mention the exis-

Julien d'Ascalon: *Droit et architecture en Palestine au VI^e siècle* (Paris, 1996), 34–35 (chap. 4, 1–3); see also *EB*, 18.3, which, in a catch-all provision, succinctly adopts the same recommendations: "The bakers must establish their bakeries in locations that are not dangerous and that are not situated under dwellings, by reason of the easily flammable materials that they use. And the citizens, they too, must store fodder, kindling, and flammable matter in open places or in enclosed storehouses, out of fear that these easily flammable materials might provoke conflagrations in the city."

³⁵⁰ See, for example, the *Vie de Jean de Chypre*, chap. 20, pp. 368, 471, in which we find Peter the customs official in Alexandria laying in stores of white bread from the baker.

³⁵¹ *Notitia Urbis Constantinopolitanae*, in *Notitia dignitatum*, ed. O. Seeck (Berlin, 1876), 230–43; cf. G. Dagron, *Naissance d'une capitale: Constantinople et ses institutions de 330 à 451* (Paris, 1974), 532–33; J.-M. Carrié, "Les distributions alimentaires dans les cités de l'Empire romain tardif," *MEFRA* 87 (1975): 995–1101. With respect to Rome, the *Curiosum Urbis Regionum XIV* and the *Notitia Regionum Urbis XIV* enumerate 254 bakeries (274 in a Syriac version) without drawing a distinction between public and private bakeries.

³⁵² *Vie anonyme d'Olympias*, ed. A.-M. Malingrey, in John Chrysostomos, *Lettres à Olympias*, (Paris, 1947), 416–17, chap. 5; Dagron, *Naissance*, 503–4.

³⁵³ Gautier, "La *Diataxis* de Michel Attaleiate," 42.

³⁵⁴ See the astonishing story reported by Socrates, *Hist. eccl.*, 5.18, PG 67:609–12; regarding the utilization of slaves, see Hadjinicolaou-Marava, *Recherches*, 35–37.

³⁵⁵ See Mango, *Développement urbain*, 40, 59; A. Berger, *Untersuchungen zu den Patria Konstantinupoleos* (Bonn, 1987), 312–16, 321–22, 338–46; Magdalino, *Constantinople médiévale*, 21–25, in analyzing various passages of the *Patria*, believes that a large grain distribution complex progressively developed between the harbor of Theodosios and the Amastrianon and that it included the granary of Lamia, associated with one or more of the bakeries; the granary was a charitable institution built by the empress Irene, possibly later incorporated into the Myrelaion—the vast foundation of Romanos Lekapenos. During Nikephoros Phokas' usurpation, Joseph Bringas, the minister faithful to the dynasty, with the city still under his control, threatened to starve the populace, and, traveling by horse along the Milion, went off to "prohibit the *artopoioi* from making bread and from putting it up for sale on the market"; *De cer.*, 1.96 (1:436). In the *Life of St. Andrew the Fool*, the Artopoleia is the locale in which idlers come to restore themselves in the taverns, by drinking wine and eating *mezedes* with some bread. See below, 451–53.

tence of charitable institutions, whose daily bread distributions, now charity rather than *annona*, fed an extremely large number of indigents.³⁵⁶

The *Book of the Eparch* confirms that neither public bakeries nor a state monopoly continued to exist. Rather, there was a guild that would have been comparable to the others in every respect, except that it was exempt from all *corvées* or requisitions that might have interrupted the manufacture of bread³⁵⁷ and that it involved a sensitive product subject to a high degree of supervision by the eparch. Authorities set the price of bread—or more precisely its weight, since, for accounting reasons and because of the rigidity of the monetary system, it was the *weight* of bread that varied while the price remained fixed. The mechanism was as follows.³⁵⁸ (1) Bakers or their agents came to the prefecture on a regular basis to negotiate with the eparch the weight of bread as a function of the price at which they had purchased the wheat (which should be understood, here again, to be the weight of wheat per nomisma. (2) The price or weight of bread had to allow a constant profit: 2 miliaresia per nomisma ($\frac{1}{6}$ or 16.7%) for general expenses—particularly burdensome in that these included a large labor force, animals, and fuel for lighting and the ovens; 1 keration per nomisma ($\frac{1}{24}$ or 4.2%) as profit for the baker himself, who, more often than not, had rent to pay. (3) Finally, the *symponos* and his agents were charged with applying the fixed tariff, from bakery to bakery, after the various operations (milling, rising, and baking) had taken place. The eparch's assessor (who seems to have been itinerant, whereas the eparch himself remained at the prefecture) undoubtedly used factoring tables to facilitate the various conversions of weights, prices, and percentages, necessary when the calculation moves from wheat to bread. Pliny the Elder gives only a rudimentary estimate of such conversions;³⁵⁹ a somewhat more detailed formula appears under the name of Florentinus in the *Geoponika*.³⁶⁰

1. Having carefully picked over the undamaged wheat [to remove rotten kernels], and having sieved it, weigh it, and if you find that the modios equals 40 pounds

³⁵⁶ For the reign of Irene: Ps.-Kodinos, *Patria*, 3:85 and 173, ed. Preger, 246, 269; for the Myrelaion of Romanos Lekapenos, see *Theophanes Continuatus*, 430, which specifies that the emperor ordered daily distribution of bread to 30,000 indigents.

³⁵⁷ *EB*, 18.1–2.

³⁵⁸ *EB*, 18.1, 4. The first paragraph should be understood thus: “The bakers must, on the order of the eparch, make their weights conform with the [purchase] price of the wheat. Having purchased a quantity of wheat corresponding to one nomisma and having milled it and let it rise in the presence of the eparch's assessor [ἐν τῷ συμπόνῳ should probably be emended], they must calculate their profit.” It is not the “storehouse” (*magasin*) of the eparch or of his assessor (Nicole, *Livre de Préfet*) that is at issue, and one can in no way conclude from this passage that the bakers obtained wheat from public granaries. Durlat, “L’approvisionnement de Constantinople,” in Mango and Dagron, *Constantinople and Its Hinterland* (as above, note 179), 29; Koder, “Επαγγέλματα,” 363–71, esp. 366–67. The system for determining prices was the same for bread and for wine: *EB*, 19.1.

³⁵⁹ Bread weighs one-third more than the flour that is used for its manufacture: *Hist. nat.*, 18.67; see Foxhall and Forbes, “Σιτομετρεῖα,” 79–80.

³⁶⁰ *Geoponica sive Cassiani Bassi scholastici De re rustica eclogae*, 2.32, ed. H. Beckh (Leipzig, 1895), 2.32, p. 71.

[13 kg], you may expect the equivalent in pounds of bread, for the reduction that results from the subtraction of the bran will be compensated by the addition of water in the course of milling and other operations [leading to the preparation of the dough]. 2. The baking of the bread results in a loss of one-tenth and one-twentieth [that is, a total of 15%] of the weight, so that as it is baked the bread will lose 1.5 pounds for every 10 pounds. 3. The same reduction in weight [in baking] necessarily applies to second-quality bread, as well as to bread made of pure wheat.³⁶¹

There is no evidence for regulation or permanent supervision of prices outside Constantinople.

Butchers and Fishmongers The provisioning of Constantinople with meat was either regional (Thrace, Bithynia, Paphlagonia, Galatia) or involved sources at a greater distance (the Anatolian plateau).³⁶² Such would seem to be the meaning of the provisions in the *Book of the Eparch* that distinguish between whole herds (essentially of sheep) belonging to large landowners, coming from “outside” and driven to Nikomedeia or Constantinople by agents or by livestock merchants acting as intermediaries (*provatori*, *provatemporoi*),³⁶³ and the various animals that the peasants of areas closer in would have been able to sell on their own in the markets of the capital, without obstruction from those professionals who sought to obtain a form of monopoly.³⁶⁴ It appears that butchers did not have the right to meet the couriers, nor could livestock merchants take unrestricted delivery of livestock outside the system of controls; they were, however, encouraged to go negotiate the price of herds “beyond the Sangarios River” (that is, outside what we might call, in a broad sense, the “region” of Constantinople) in order to obtain meat at a better price by cutting out the intermediaries.

In any event, the animals would have been transported on foot to the market of the *Strategion* (and at Easter and at Pentecost, to the Forum Tauri) so that the prefecture could exert its control.³⁶⁵ The *Eisagoge* simply requires the eparch to check that meat is selling at a just price,³⁶⁶ but the *Book of the Eparch* goes into more detail: the eparch set not only the price of sheep on the hoof (or more precisely the number of sheep that butchers could purchase for 1 nomisma [between 6 and 10 according to the

³⁶¹ The divergence between the calculation of Pliny the Elder and that of Florentinus arises undoubtedly from the fact that the latter considers only bread with a very high proportion of very pure white flour (except for the case of loss to the baking). See the calculations of J.-M. Carrié, according to which 1 kg of wheat after milling renders 0.44 kg of white flour, 0.66 kg of second-quality flour or 0.88 kg of whole wheat flour, and 1 kg of flour gives 1.5 kg of bread: “Les distributions alimentaires,” 1045–46, followed by Durliat, *De la ville antique*, 62.

³⁶² A general account appears in Koukoules, *Βίος*, 5:46–66; *ODB*, s.vv. “Butcher,” “Goat,” “Meat,” “Sheep,” “Swine”; Hendy, *Studies*, 562–66.

³⁶³ *EB*, 15.3.

³⁶⁴ *EB*, 15.4.

³⁶⁵ *EB*, 15.1, 5.

³⁶⁶ *EB*, 4.8; Zepos, *Jus*, 2:244.

sources]),³⁶⁷ but also the proportion within this total of young lambs, which would evidently weigh less than adult sheep.³⁶⁸ He was present at the slaughtering of livestock by the butchers, who took their profit in kind (the feet, the head, and the viscera), the other parts being sold at no profit, for a sum that was simply a function of the purchase price.³⁶⁹

Prefectural regulation imposed an absolute separation between “butchers,” who were allowed to trade only in beef and particularly mutton, and the “pork merchants,” who were suspected of being likely to strike private bargains with swine merchants from the adjoining regions instead of transacting their sales at the Tauros, under the watch of the eparch. Nor were they the only parties that attracted suspicion: butchers, the households of the *archontes*, and the local grocers undoubtedly tended to supply themselves directly with livestock, or with smoked and salted pork, for their own consumption and for resale at a profit, which would have taken on a more or less speculative character in times of shortages; the practice was decried and subject to severe sanctions.³⁷⁰

Even more so than meat, fish was a function of regional geographic and climatic conditions, but was also dependent on fishing techniques in which Byzantium, following the Greek and Roman tradition, was well versed: fresh- or saltwater fishponds numbered in the hundreds in rural areas; there was line- or single-net fishing, which was allied to the pleasures of the hunt, fishing by pelagic nets (presupposing a boat and several men), and finally fishing by stationary nets—more profitable but requiring a team and quasi-permanent installations along the corridor used by migratory or semimigratory fish: simple funnel-shaped wattle traps set up at the mouths of rivers or at the outfalls of lakes and lagoons, or *epochai*, nets that were stretched over piles and into which the fish were swept.³⁷¹ This form of fishing was certainly not invented in Constantinople, as Leo VI thought it to have been,³⁷² but it adapted itself particularly

³⁶⁷ *EB*, 15.5; on prices, see, cf. Cheynet, Malamut, and Morrisson, “Prix et salaires,” 349–50; cf. Morrisson and Cheynet, “Prices,” Table 11.

³⁶⁸ The expression τῇ ἑκατοστῇ (*EB*, 15.5), for which Nicole has proposed a number of interpretations, should undoubtedly retain its sense of “percentage” in this context and be so translated (suggested to me by N. Oikonomides).

³⁶⁹ *EB*, 15.2; it seems that it was the butchers themselves who undertook the slaughtering. In Rome, it was the *lanius*, distinct from the butcher, who received as compensation the head, the feet, and the fat from the neck and the udders: A. Chastagnol, “Le ravitaillement de Rome en viande au Ve siècle,” *RH* 210 (1953): 13–22. The tradition continued up to the 20th century in a fair number of Mediterranean countries.

³⁷⁰ *EB*, 16.2–5.

³⁷¹ See K. Devedjian, former director of the fish market of Constantinople and controller-in-chief of the fisheries, *Pêche et pêcheries en Turquie* (Constantinople, 1926); K. Triantaphyllopoulos, “Die Novelle 56 Leos des Weisen und ein Streit über das Meeresufer im 11. Jahrhundert,” in *Festschrift Paul Koschaker* (Weimar, 1939), 3:309–23; E. Trapp, “Die gesetzlichen Bestimmungen über die Errichtung einer ἐποχή,” *ByzF* 1 (1966): 329–33; G. Dagron, “Poissons, pêcheurs et poissonniers de Constantinople,” in *Constantinople and Its Hinterland* (as above, note 179), 57–73.

³⁷² *Novelles de Léon VI*, 57, pp. 214–17.

well to the ecology of the Constantinopolitan region, which was characterized by the seasonal migration of mackerel, young tunny (*palamis*), bonita, and tuna, which, after spawning, traveled in mid-spring from the Sea of Marmara to the Black Sea, then returned in the opposite direction in the fall.³⁷³ At one stage or the other, they were caught in whole schools in the many trap nets on the Bosphoros and the Sea of Marmara, and fish constituted an abundant and inexpensive source of food for the city; the sources often credit it with moderating the effects of food shortages.³⁷⁴

These fishing grounds are described at the end of the tenth century in the *Vita* of Loukas the Stylite (d. 979) who, from the top of his column on the sea's edge near Chalcedon, blesses the net installations that the fishermen have set up nearby, and receives every tenth fish as tribute (*apodekatosis*).³⁷⁵ The proliferation of fishing installations raised the juridical problem of who owned the shoals on which they were set up, that is, the annexation of these shoals by the owners of lands bordering the sea. In fact, following the Roman tradition, the sea and the shoreline were *res communis*.³⁷⁶ However, confirming a practice that closely resembles an abuse, Leo VI promulgated five novels that granted ownership of the shoals to the owners of the shoreline and required a clear distance of at least 700 m between any two net installations.³⁷⁷ He thus opened the door to all sorts of disputes and privileges, and permitted the lasting triumph of custom over law. Michael Attaleiates informs us that in the eleventh century the principal beneficiaries of these measures were the monasteries and the religious foundations, which owned the vast majority of *skalai* and fishing grounds and exploited them directly or leased them.³⁷⁸ In any event, the Bosphoros and the Sea of Marmara were covered with fishing grounds that supplied the fish most commonly sold in the markets of the capital.

The fishermen themselves, or members of their households, sometimes marketed their catch at the wharves or through itinerant sale.³⁷⁹ But the importance of fish in the diet led the prefecture to regulate distribution and price. Fishmongers, grouped into a guild and situated in markets, were required in principle to purchase the fish from the fishermen at the wharves or at the waterside; in order to avoid too high an incidence of retail sales and to permit more effective supervision, fishmongers were not permitted to meet the fishermen directly at the sea or on the fishing grounds.³⁸⁰ Fresh fish was sold in markets probably located at the Golden Horn (near Neorion?).

³⁷³ See Devedjian, *Pêche et pêcheries en Turquie*.

³⁷⁴ See above, 439.

³⁷⁵ Chaps. 38–40, ed. F. Vanderstuyf, "Vie de saint Luc le Stylite," PO 11.2, 229–33 = *Les saints stylites*, ed. H. Delehaye, (Paris, 1923), chap. 16, pp. 212–13.

³⁷⁶ *Dig.* 47.10.13.7 = *Bas.* 60.21.13.7.

³⁷⁷ *Novelles de Léon VI*, 56, 57, 102, 103, 104, pp. 212–17, 334–41.

³⁷⁸ Attaleiates, 277–78.

³⁷⁹ See the letter of Tzetzes cited below (note 384) and ep. 43 (lines 40–41) of Patriarch Athanasios: A.-M. Talbot, ed. *The Correspondence of Athanasius I, Patriarch of Constantinople* (Washington, D.C., 1975), 90–91.

³⁸⁰ *EB*, 17.3.

Unsold merchandise, dried and salted by the *taricheutai*, was sold to the local grocers; only this surplus could be exported.³⁸¹ Thus there was control by the prefecture of marketing, but also of prices and profit margins: the leaders of the fishmongers' guild were required to appear at the prefecture at dawn to announce the last night's total catch of "white fish"³⁸² in order to establish authoritatively a sale price intended to compensate for the wide seasonal variations in the catch. This sale price was supplemented by a "profit," calculated somewhat curiously in two stages: at the time of the purchase of the fish from the fisherman, the fishmongers of each market collectively received 2 folleis and their *prostates* received 2 folleis ($\frac{2}{288}$, or 1.4% of the sale price), a rather low recompense that perhaps defrayed the cost of transport, or the various *sportulae* to be paid to the agents of the prefecture; on resale in the market they receive 1 miliaresion per nomisma ($\frac{1}{12}$, or 8.3%)—a perfectly normal profit margin.³⁸³ As indicated in a letter of John Tzetzes, even in the twelfth century the consumers of Constantinople maintained the limit of $\frac{1}{12}$ on profit and denounced to the eparch those poor merchants who bought mackerel at 12 to the follis and resold them to the consumer at 10 to the follis (instead of 11), thus realizing a profit of 16.6% (rather than 8.3%).³⁸⁴ For this widely consumed, low-priced commodity, the housewives of Thessalonike, like those of the capital, were in the habit of asking the fishmonger, "Those mackerel—how many per obol?"³⁸⁵

Wine Merchants, Taverners, and Grocers In fourth-century Rome there was an *arca vinaria* and undoubtedly a double market for wine: a free market and one that was controlled by the state.³⁸⁶ Such a structure did not exist in Constantinople, but the "Edict of Abydos" notes frequent loads of wine from Cilicia, for which the regular tariff of *sportulae* was lowered.³⁸⁷ In the *Book of the Eparch*, the price of wine is also controlled. At each delivery, the guild masters of the taverners (*kapeloi*) negotiated with the eparch a sale price based on purchase price; as with bread, the eparch's assessor was responsible for making the taverners put their measures into conformity with the price, that is, going to the taverns to verify that the negotiated price was reflected in the volume, or the weight, so that the sale took place at a fixed price.³⁸⁸ Other sources mention

³⁸¹ *EB*, 17.1, 2.

³⁸² *EB*, 17.4. In the context, it should be understood that the reference is to "white tuna," distinguished even today from "red tuna." It was caught in great numbers in trap nets (ἐποχαί), especially at night, and were the most important for public consumption.

³⁸³ *EB*, 17.1, 3. A discussion of these percentages appears in Dagron, "Poissons, pêcheurs."

³⁸⁴ Tzetzes, ep. 57, 81–82; regarding this letter, cf. E. Papagianni, "Μοναχοί καὶ μαύρη αγορά στό 12ο αἰώνα. Παρατηρήσεις σε προβλήματα τοῦ Επαρχικοῦ Βιβλίου," *Byzantiaka* 8 (1988): 59–76.

³⁸⁵ *Pseudo-Luciano, Timarione*, ed. Romano, 69. "Obol" here means the copper follis, that is to say, the smallest monetary unit.

³⁸⁶ A system described in particular by A. Chastagnol, "Un scandale du vin à Rome sous le Bas-Empire: L'affaire du préfet Orfitus," *Annales ESC* 5 (1950): 166–83.

³⁸⁷ See above, note 317.

³⁸⁸ *EB*, 19.1.

certain well-known vintages from Bithynia, Mitylene, Euboia, Chios, Rhodes, or Crete,³⁸⁹ whose import and sale would not have been supervised.

At the same time that they marketed the wine (ordinary or vinegared wine: *posca*, *phouska*, *oxykraton*),³⁹⁰ the *kapeloi* served prepared dishes, in particular *mezedes* to accompany beverages. Patronized by idlers and wastrels, the taverns had a bad reputation. Specific “rules of urbanism” prohibited outside porches and benches, which would have allowed the taverns to spill out into the street and to make a public show of “debauchery;”³⁹¹ they sought to limit the hours of operation in order to avoid scenes of all-night drinking and brawling and so that the faithful would not be diverted from attending the morning mass on Sundays and feast days.³⁹² Conciliar canons often deemed it necessary to prohibit clerics from frequenting or using the *kapeleia*,³⁹³ but it is nonetheless the Lives of the saints—and in particular those of the troublesome “holy fools” (*saloi*)—that most realistically describe the conviviality of the Constantinopolitan taverns in the Artopoleia quarter.³⁹⁴

The term *kapelos* and its compounds have another meaning, just as pejorative, and designate (with the intent of stigmatizing it) resale at profit in small-scale trade.³⁹⁵ This practice was held to be especially shameful when it involved a *sitokapelos* who accumulated supplies with the intent of speculating in times of shortages,³⁹⁶ but it was condemned generally by ecclesiastical sources, which likened it to usury and speculation.³⁹⁷ Following the Roman tradition, the sources classify the merchants into two groups: those who sell products that they themselves have manufactured, transformed,

³⁸⁹ These wines of quality are cited in particular in Theodore Daphnopates, *Correspondance*, ep. 37 (lines 5–45), pp. 207–209; Haldon, *Three Treatises*, 132 (lines 590–602); Theodore Prodromos, “Satire of the Higoumenoi,” *Poèmes prodromiques*, 55–56, 60, 62 (III, lines 155–57, 195–200, 284–86, 312–15). See also the data provided by Hendy, *Monetary Economy*, index, s.v. “Wine.”

³⁹⁰ See above, 440.

³⁹¹ Saliou, *Le traité d’urbanisme de Julien d’Ascalon*, 44–45 (chap. 17, 3); see also Psellos, ep. 83, Sathas, *MB*, 5:320.

³⁹² *EB*, 19.3, for which parallels exist with respect to Rome: Ammianus Marcellinus, 28.4.4, and with the later Byzantine period: Andronikos II, Novel 26, Zepos, *Jus*, 1:535 (§ 7), and letters 42 and 43, of Athanasios I, Talbot, *Correspondence of Athanasius I*, 86–91. Cf. G. Dagron, “Jamais le dimanche,” in *Mélanges Hélène Ahrweiler* (as above, note 214).

³⁹³ Canon 44 “of the Apostles” (Rhalles and Potles, *Σύνταγμα*, 2:71–73); Canon 24 of the Council of Laodikeia (*ibid.*, 3:192), Canons 9 and 76 of the Council in Trullo (*ibid.*, 2:326–28, 480–83).

³⁹⁴ *Das Leben des heiligen Narren Symeon von Leontios von Neapolis*, ed. L. Rydén (Stockholm, 1963), 147, 153, 164–65; *Vie de Jean de Chypre*, chap. 14, pp. 362–63; *Life of St. Andrew the Fool*, 2:28–31, 36–39, 40–41, 92–95, 96–97 (lines 232–71, 351–70, 408–21, 1217–40, 1262–63).

³⁹⁵ The verb *καπηλεύειν* appears as early as 2 Cor 2:17, to designate those who “barter with” the word of God. Note *EB*, 11.1, in which the *keroularioi*, lacking their own shop, lay in stores (*ἐγκαπηλεύονται*) of candles, which they later sell on the market.

³⁹⁶ Gregory of Nazianzos, *Or.* 16.19 and 43.34, PG 35:960 and PG 36:544, respectively; see the passages (cited above, 444–45) in *Theophanes Continuatus*, 479 (regarding the famine of 960) and Skylitzes, 277–78 (the shortage of 967); Athanasios I, in 1304, threatened to anathematize all *σιτοκάπηλοι*: Talbot, *Correspondence of Athanasius I*, 266–67, ep. 106.

³⁹⁷ A canon attributed to Nikephoros the Patriarch, but of uncertain date, likens (more or less) the *kapelos* to a usurer and limits profit to 10%: J.-B. Pitra, *Juris ecclesiastici Graecorum Historia et Monumenta* (Rome, 1868), 2:323–24. The *typikon* of Constantine Monomachos for Mt. Athos renews the interdic-

or imported from a distance, and those who add no “labor” to the products that they market and are moved solely by the “lure of profit.”³⁹⁸

There nonetheless existed in Byzantium, as everywhere else, “grocery shops,” which the *Book of the Eparch* defines and whose specific economic functions it describes: these were readily accessible businesses, scattered throughout the city “so that the populace may have at hand that which it needs to live” (as distinguished from other trades whose concentration in one or another district or street was a function of their high degree of specialization, of competition, and of control). The grocery shops sold a diverse range of products at retail (salted or dried fish and meat, butter, cheese, oil, honey, vegetables, dried legumes, hemp, linen, various containers, nails); the difficulties of provisioning, stocking, and sale justified a high margin of $\frac{1}{6}$, or 16.6%.³⁹⁹ It is clearly specified, however, that these grocery shops could not encroach on other specialties, in selling, for example, soap, cloth, wine, fresh meat, wax, and, especially, luxury products reserved to druggists-perfumers. With respect to the latter, the dividing line, we are told, was between “what smells bad and what smells good”—between items of regional production and those that were imported from great distance (pepper, cinnamon, aloe wood, musk, incense, etc.) and whose quality was to be safeguarded; the criterion was that the grocers made use of the “Roman scale” (steelyards; *kampana*) and not the delicate double-pan (*zyga*) balance scales, used for the more precise measurements of the druggist-perfumer.⁴⁰⁰

This same concern for product quality and fear of contamination with the “grocery trade” is evident in the prefectural regulations concerning chandlers, whose shops tended to be concentrated around churches; it was feared that they might adulterate the candles by including animal fat or by using residues.⁴⁰¹ Similar concerns may be seen with regard to soapmakers (or washers) suspected of engaging in magic or felonious practices.⁴⁰²

tion for the monks of this *kapelikos porismos*, which consists of purchasing to resell at profit: *Prôtaton*, no. 8 (lines 58–59, 133–34).

³⁹⁸ See in particular Giardina, “Modi di scambio,” esp. 535–48.

³⁹⁹ *EB*, 13.1, 5.

⁴⁰⁰ *EB*, 10.1, 5–6; 11.8; 13.1.

⁴⁰¹ *EB*, 11.4. The trade probably tended to be geographically dispersed, for the regulation stresses the grouping into *ergasteria* and the prohibition of itinerant sale and resale on the market (11.1). There was evidently a fairly dense group of *κηρουλάρια* at Hagia Sophia, which caused a fire at the end of the reign of Leo VI (*Theophanes Continuatus*, 377). We have the example of a *keroularios*, set up in the Forum of Constantine under Nikephoros I, who amassed a fortune of 100 pounds of gold, confiscated by the emperor (Theophanes, 487–88). Particular importers of wax into Constantinople were the Bulgarians and the Russians.

⁴⁰² *EB*, 12.4–8; on the manufacture of soap, cf. R. J. Forbes, *Studies in Ancient Technology* (Leiden, 1955), 3:174–82. The soap termed “Gallic” (*EB*, 12.4) was apparently limited to medicinal uses. For a miraculous healing due to soap sold at the gate of a church, see *Vie et miracles de sainte Thècle*, ed. G. Dagron (Brussels, 1978), 400–403, no. 42.

The Late Byzantine Urban Economy, Thirteenth–Fifteenth Centuries

Klaus-Peter Matschke

It is still widely believed that the late Byzantine period was a time when urban developments that had begun earlier simply continued and eventually petered out. That was by no means the case. We now have compelling reasons to think that this period was a special phase of development with many unique and some novel expressions of urban life. The spectacular event of the capture of Constantinople by the Latin forces gave the cities of the Byzantine provinces at the very outset of this period an unprecedented opportunity to fall back on their own strengths and resources. Evidently they put this opportunity to very good use, for Constantinople's return to the empire's fold did not mean a return to the old status quo, precisely because the provincial cities did not vanish again into the shadow of an almighty capital. Some cities, taking advantage of particularly favorable conditions, created remarkable footholds of urban autonomy; others left the Byzantine imperial fold altogether while continuing to be linked to it with multifarious ties. But Constantinople also showed that it could be more than a giant devouring the empire's resources: at least there were hints of the city's potential, hints that it was perfectly capable of discovering and mobilizing its own powers against varied and constantly growing threats, of reacting with remarkable flexibility to ever new challenges. And as far as society as a whole was concerned, the role of the late Byzantine city did not diminish. If anything, compared to other periods of Byzantine history, it grew: in the end the empire consisted almost entirely of various cities and their constantly shrinking environs and hinterlands.

The urban economy greatly influenced these phenomena and developments and was in turn strongly influenced by them. However, the precise details of how this reciprocal influence worked can rarely be seen clearly; often we can do no more than conjecture, and most of this development is still shrouded in obscurity.

Economic Aspects of the Late Byzantine City

The economic character of the Byzantine city did not undergo any fundamental change during the late period. However, we can assume, and in part demonstrate, that

there were shifts in the balance of elements and factors that shaped this economic character, shifts in how they interrelated and interconnected.

From an economic point of view, the late Byzantine city was, first of all, a concentration of consumers, a center of demand for and consumption of material goods. Late Byzantine cities also remained centers of state and church administration. After 1261 Constantinople became once again the focal point of the imperial court and the orthodox patriarchate. This also made it the main seat for a bewildering array of governmental and ecclesiastical officials and dignitaries, and the place where they preferred to satisfy their varied and sophisticated material needs. However, already during their exile in Asia Minor, the late Byzantine emperors had resided not only in the official capital of Nicaea; they may have spent just as much time in two other cities of their empire: Nymphaion and Magnesia. At first the emperors of the Palaiologan dynasty continued this practice; it was not rare for them and their court to spend longer periods of time in Thessalonike and Didymoteichon, and for a brief time they were also forced to reside in Adrianople. The result was that at least Didymoteichon experienced for a time a noticeable economic upswing.

What made late Byzantine cities centers of individual and collective consumption was also the fact that most of the late Byzantine aristocracy continued to reside there. To be sure, quite a few *archontes* and *dynatoi* from the capital and various larger provincial cities, such as Thessalonike, sometimes spent a considerable portion of the year on their domains, in their residential towers and manor houses near the cities. Even so, they kept their chief urban residences to which they retired, at least during the winter, along with their retainers and the products of their estates. And throughout the year they used their close ties to the city and urban markets to pursue a variety of commercial activities that offered profit of every kind.

The needs of the common city dwellers were modest and much the same winter or summer; the needs of most people were limited to a minimum of food—some bread, vegetables, fish (but not everywhere), very little meat—and a few simple pieces of clothing. But since the middle and lower classes were generally much more numerous than all the resident officials, aristocrats, military men, and intellectuals combined, they shaped the character of the cities as centers of consumption at least as much as did the much more sophisticated and varied needs of the upper class.

The function of the late Byzantine city as a center of consumption was noticeably affected, however, by the fact that the weakening of the empire and the shrinking of its territory necessitated a successive dismantling of the administrative apparatus of the state and the church. To the very end, governmental offices and sinecures figured prominently in the considerations of the upper class; for some, indeed, they were of existential importance. Yet the attraction of government service waned with the declining profitability of state sinecures. Another factor that had more negative repercussions than before is that the late Byzantine aristocracy as a whole was not highly developed; in some cities it seems too small in sheer numerical terms to secure economic stability and create a well-funded demand for material goods.

Moreover, the numerical weight of the other groups of urban consumers also did

not increase over the long run. Rural dwellers who fled into the late Byzantine cities were demographically offset by urban dwellers who fled to foreign lands or switched sides to join the victorious enemies of the empire. Constant military pressure led to additional population losses. Finally, we must add epidemics that began with the great plague of 1347/48 and troubled the empire to the very end; as in the West, the impact was probably more severe in the cities than in the countryside.

Thus, despite the growing importance of the city in late Byzantine society, population figures for the cities generally declined. Only two cities during this period are known to have had more than 10,000 inhabitants. The population of Constantinople may have even exceeded 100,000 during the early Palaiologan period, though shortly before the city fell to the Turks the number was barely half that. The population figures for Thessalonike were on the same order of magnitude—about 40,000—when the city came under Venetian administration in 1423, and they continued to decline until the final occupation by the Turks. Didymoteichon, Serres, and Ioannina may have experienced a short-term population growth during the early Palaiologan period, and the population of Mistra may have continued to grow even into the fifteenth century. But none of these cities is likely to have crossed the ten thousand mark during Byzantine times, and the basic negative trend, which amounted to a diminution of the role of the late Byzantine city as a center of consumption, was not substantially affected by these scattered and short-lived countervailing developments.

In principle, the late Byzantine city also continued to be the place where society's material resources were gathered and concentrated—society's treasuries. The late Byzantine court was not only a center of consumption. It also disposed of all essential commodities and many luxury articles that made this consumption possible. The residences of late Byzantine city governors had warehouses of foodstuffs, grain, oil, salt, and wine. These provisions were used to supply local demand, secure the city's needs in times of crises and war, and engage in commercial and speculative activities during war and peace. The urban residences of the aristocracy included large storehouses, clothing stores, and stables. In preparation for lengthy sieges, the population of the capital, and perhaps of other cities as well, was required to lay in a stock of foodstuffs with governmental subsidies or at their own expense.

In addition to products of the soil, foodstuffs, and luxury articles, the wealth in precious metals—coined and uncoined—was also concentrated in the cities. Revenue from taxes, tariffs, and other state prerogatives such as confiscations, treasure finds, and certain inheritance rights flowed into government coffers. Members of the aristocracy deposited their money and valuables in wooden boxes, chests, and copper vases, sometimes under their own beds in the chambers of their city palaces. Some members of the imperial family and the ruling family clan even had treasurers in their retinue. In times of political crises and threats of confiscation, those at risk tried to bury their wealth or deposit it with friends and acquaintances; evidently the possibility of concealing it in bank accounts did not exist yet. In the early years of the Palaiologan period, however, we notice a trend among aristocrats: they left the restless and dangerous cities with their material assets and sought safety in specially constructed treasure strong-

holds close to the city. From there they also exerted pressure on rival factions during intercity conflicts. However, from the mid-fourteenth century, at the latest, the occupation of the open countryside by Serbs and Turks all but destroyed this option of dealing with private wealth. In the late Byzantine period we then see a growing number of Byzantine aristocrats and men of wealth who transferred their movable assets to Latin colonies such as Negroponte, Korone/Methone, and Crete. Eventually they even deposited them in Italian banks or invested in the public debt of Venice, Genoa, and Caffa. While state finances shrank drastically during the last century of the empire, while the last Byzantine emperors had increasing difficulties making basic payments and were deprived, not least, of the ability to distribute largesse with a generosity appropriate to their self-conception, some Byzantine residents of Constantinople and a few other cities of the empire continued to amass huge private fortunes. They even managed to preserve these fortunes beyond the fall of the empire and its capital, and this secured, at least in part, the role of the late Byzantine city as a center of society's material resources.

Finally, the late Byzantine city continued as a center for the production and distribution of material goods, home to workshops, stores, money-changing tables, market squares or market streets, commercial harbors, public scales, and customs stations. Yet at the same time the late Byzantine city had many elements of a large village. The aristocracy that owned vast tracts of land and lived in the city brought some of the countryside and of agriculture into the city. There were many places with an urban character where residents were predominantly peasants and small landholders. And many other city dwellers also engaged in agricultural activities part-time. Urban life was very profoundly shaped by the rhythm of agricultural work. The two late Byzantine *metropoleis*, in particular, had gardens, vineyards, fields, and pastures or wasteland within their city walls and fortifications. A Latin source tells us that, already in the early fourteenth century, only a third of the capital was still inhabited. However, this is not necessarily and unequivocally a sign of urban decay. At this time the cities in the Latin West, as well, still had close ties to agriculture. Western cityscapes of the high and late Middle Ages show not only tall houses and narrow streets behind the city walls, but also gardens and open space. Sowing and harvesting played a central role also for most city dwellers in the West.

Moreover, during this period we can also observe opposite trends, at least temporarily, that is, the urbanization of territories lying outside the walls of some cities. These territories became more densely settled, were partially fortified, and were no longer used exclusively for agriculture. In Didymoteichon this kind of development came to an abrupt halt during the civil war of 1342; in a few other cities, such as Mistra, it may have lasted longer and continued. Conversely, the ruralization of urban territory, also in the case of Constantinople, did not actually reach the point where the city dissolved into individual villages that were isolated from one another and had their own fortifications. Notwithstanding the shrinkage and reductions, Constantinople remained to the very end a place where people not only sowed and harvested but traded, both foreign products and goods from the city's own artisanal production.

The Economic Typology of Late Byzantine Cities and Settlements

We have very few late Byzantine descriptions of cities that yield information about the economic profile of the cities and their classification according to various economic types. Rarer still are urban tax registers with precise population figures, concrete structures of activities, and a careful breakdown of economic activities. As far as late Byzantine Constantinople is concerned, however, we can draw on various descriptions to gain some impression of the city's everyday economic life. A letter by the metropolitan Matthew of Ephesos from the 1330s or 1340s describes how an unnamed man had to run the gauntlet in an unnamed city, which can only be Constantinople. Matthew does not tell us why the man, who was not poor and probably had some standing, became the laughingstock of the citizens and the victim of their persecution. But he does mention that people παντός . . . τῆς πόλεως μέρους, under the arcades, in the markets, and in the boulevards were engaged in what the metropolitan considered reprehensible behavior. The victim could not appear in the market, go to the harbor, or enter the court building or a church without being verbally and physically abused by smiths, tavern keepers, cobblers, shipbuilders, and construction workers. The poor wretch could neither buy nor sell anything, his tormentors would rob him of money and goods under the pretense of a cruel sport.¹

Very different, and much more concrete, was the parading and foraging of an urban notable, one Demetrios Katablattas Katadokeinos, a judge of the *velum*, who became the target of a literary invective by the humanist John Argyropoulos in the capital during the last years of the Byzantine empire. Argyropoulos described his arrogant promenading in his official attire "through the marketplace and the other city streets" (διὰ μέσης τῆς ἀγορᾶς καὶ τῶν ἄλλων τῆς πόλεως ἀγυιῶν), followed by a foray with a knapsack through the city's commercial section at the Golden Horn to the fish market, the vegetable market, past the cheese vendors, caviar sellers, and pork and fruit merchants. Other forays took him through the quarters of the artisans and merchants, who worked on the street and offered their wares, with a stop among the potters and in various merchant shops, where he either had vendors slip him much sought-after victuals and artisanal products free of charge or purchased them at greatly reduced prices with dubious tricks. At the end of the expedition he enjoyed some wine free of charge at the tavern of a well-known wine seller.²

Both accounts depict a city with a very lively economic life, diverse trades located in different quarters (the mention of potters, cobblers/leatherworkers, shipbuilders, and construction workers is perhaps more than coincidental), busy market activities that seem to have been centered especially along the shores of the Golden Horn, while the Mese, the main street through the center of the city, seems to have been devoted more

¹ D. R. Reinsch, *Die Briefe des Matthaios von Ephesos im Codex Vindobonensis Theol. Gr. 174* (Berlin, 1974), 120–23.

² P. Canivet and N. Oikonomides, "La Comédie de Katablattas: Invective byzantine du XVe siècle," *Δίπτυχα* 3 (1982–83): 53ff.

to display than to practical economic activity. Only an early fourteenth-century Latin list of activities in the capital mentions *fossatores* (agricultural laborers) explicitly alongside “*piscatores aut mercatores, seu marinarii, vel artifices*”;³ in the eyes of contemporaries, the picture of Constantinople was not dominated by agricultural activities. For Byzantines and Latins alike, the city was and is the κοινὸν ἐμπόριον γῆς ὁμοῦ (καὶ) θαλάττης (“the common emporium of land and sea”),⁴ the “*opportunum totius orientis emporium Christianitatis*,”⁵ where “*concurrunt fere omnes nationes mundi*.”⁶

The only city that was at least roughly and for a time comparable to the capital in the late Byzantine period was Thessalonike in Macedonia. It was variously described as a μεγαλόπολις and occasionally also as an ἀγορά (marketplace) that offered goods from everywhere.⁷ Until it was lost to the Byzantine Empire, in the late fourteenth century, and even thereafter, the πόλις or *civitas* of Ainos in the delta of the Hebros (Marica) was surely representative of the medium-sized port city. According to Kritoboulos of Imbros, it was “important for many different reasons: because of large revenues, a favorable location, the fertility of the soil, and many other things.” Its inhabitants guided seagoing vessels through the Aegean and rivergoing vessels up the Marica. They carried on trade especially with the hinterland and the offshore islands. They lived from agriculture, fishing, and hunting, and they grew wealthy, particularly from the intensive production of and wide-ranging trade in salt.⁸ The shipyard that is attested in the fifteenth century⁹ may have already existed during Byzantine times. Leaving aside Ainos’ favorable river links with the hinterland and the particularly rich maritime saltworks, the late Byzantine Empire had, at least for a time, a few other port cities comparable in type and size: Smyrna on the western shore of Asia Minor, Mesembria on the western shore of the Black Sea, and Monemvasia on the east coast of the Peloponnese, to mention a few. Rhaidestos and Herakleia on the northern shore of the Sea of Marmara, Agathopolis and Medeia south of Mesembria, and Christoupolis west of Ainos were probably cities of the same type, though surely somewhat smaller. Saltworks of at least local importance were found at some of these cities. Smyrna and Herakleia are known to have had shipyards,¹⁰ and smaller ship repairs

³ (Ps.-) Brocardus, “Directorium ad Passagium faciendum,” in *Recueil des historiens des croisades: Documents arméniens* (Paris, 1906), 2:455.

⁴ *Actes de Lavra*, ed. P. Lemerle, A. Guillou, N. Svoronos, and D. Papachryssanthou, Archives de l’Athos, 4 vols. (Paris, 1970–81), 3:23 (hereafter *Lavra*).

⁵ P. Herde, “Politik und Rhetorik in Florenz,” *Archiv für Kulturgeschichte* 47 (1965): 190, excerpt from a letter of Coluccio Salutati to Pope Boniface IX, dated 11 October 1397.

⁶ F. Thiriet, *Délibérations des assemblées vénitiennes concernant la Roumanie*, 2 vols. (Paris-The Hague, 1966–71), 2:325 (no. 1460).

⁷ *Das Register des Patriarchats von Konstantinopel*, ed. H. Hunger and O. Kresten (Vienna, 1981–), 1:248 (no. 27) (hereafter *PRK*); “Demetrii Cydonii Occisorum Thessalonicae Monodia,” PG 109:641; L. Maksimović, “Charakter der sozial-wirtschaftlichen Struktur der spätbyzantinischen Stadt (13.–15. Jh.),” *JÖB* 31.1 (1981): 152.

⁸ *Critobuli Imbriotae Historiae*, ed. D. R. Reinsch (Berlin-New York, 1983), 103f (12.1ff).

⁹ *Lavra*, 3:178f.

¹⁰ G. Makris, *Studien zur spätbyzantinischen Schifffahrt* (Genoa, 1988), 158; B. S. Pseutonkas, Φιλόθεου Κόκκινου Λόγοι καὶ Ὁμιλίαι (Thessalonike, 1981), 248.

and rebuilding may have been done at Mesembria, contrary to current opinion.¹¹ All these cities also had agrarian interests, with agricultural facilities and peasant inhabitants; however, this agrarian component did not dominate the urban economy but was subordinated to it.

Clearly distinct from these cities is the type of the small country town, which appears in another letter by the metropolitan of Ephesos. In 1332 Matthew was appointed administrator of the metropolis of Brysis in Thrace. He described his first encounter with the city in a letter to a correspondent: it is small in size and its houses are low—which probably means single-story—and not very numerous. The inhabitants are peasants and cattle farmers, but also artisans, meat sellers, and grocers. Fish and fish-mongers, however, are completely unknown. Nor does there seem to be a physician. Often the city's inhabitants are forced to eat the fruits of the fields while they are still unripe, with unsalutary effects on their health.¹²

The portrait we get is thus of a country town that lived above all from agriculture and livestock breeding, but that also had a variety of artisans and merchants. The complete absence of fish on the local market and the utter dependence on the local harvest seem to indicate that economic ties to other towns and regions were poorly developed. The only thing that does not quite fit into this picture is the special mention of meat vendors, for the local demand is unlikely to have been large enough. However, the capital was only a few days' journey from Brysis, and perhaps this small inland city was among the outlying towns that supplied Constantinople with food. The young Demetrios Kydones gives us a very fragmentary description of a similar small town in Thrace, where he spent a very short time at the beginning of September 1346. He mentions its market and reports on the daily events: an oxcart that gets stuck in the muck of the street, a quarrel over borrowed money and the interest demanded, a sale of slaves who were surely war captives.¹³

Both reports were penned by intellectuals from the big city: in their eyes the civilized world ended right outside the gates of Constantinople or Thessalonike. In fact, the late Byzantine Empire seems to have had other larger, and especially more attractive, inland cities such as Philippopolis, Adrianople, Serres, and of course Mistra: with more to offer, more civilization, livelier contacts with the outside world, though not necessarily with less agriculture. By contrast, the fortress of Sakkos near Selymbria, destroyed by fire in 1322, seems to have had little in common with a city. The place had a wall (though already dilapidated) with a single gate, the houses were of wood, its inhabitants were exclusively peasants and completely uneducated. The flames killed a total of 133 residents, mostly women, children, and old people. The inhabitants also lost all their livestock and other movable property. Extrapolating from the number of victims,

¹¹ G. L. Tafel and G. M. Thomas, *Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig*, 3 vols. (Vienna, 1856–57), 3:244f.

¹² S. I. Kourouses, *Μανουήλ Γαβαλάς εἶτα Ματθαῖος μητροπολίτης Ἐφέσου, (1271/2–1355/60)*, vol. 1, *Tà Bioγραφικά* (Athens, 1972), 271ff.

¹³ *Démétrius Cydonès, Correspondance*, ed. R.-J. Loenertz, 2 vols. (Vatican City, 1956–60), 1:26ff (no. 5).

scholars have estimated the total population at 500.¹⁴ Still, Sakkos is called only a χωρίον and φρούριον; it is not even a πολίχνιον.

What is striking is that the typology of late Byzantine urban culture is impoverished, a result of the fact that the urban economy was very uniform. Contemporary western Europe had a great variety of urban economies: from centers of long-distance trade and centers of production for export trade with a complex or one-dimensional economic orientation, to residence cities and farming towns (*Ackerbürgerstädte*). In Byzantium these clear qualitative differences in urban types are largely reduced to quantitative differences, to differences in the ratio of agrarian to nonagrarian components and, at most, to a certain degree of differentiation between inland cities and port cities. Western differences between seats of lordships and cities with civic self-government were modified in Byzantium: every larger city, and many smaller ones, as well, were centers of a regional administration, even if these regions shrank in the later years and their administrative tasks were reduced. This uniform picture of Byzantine cities undoubtedly has a lot to do with the still inadequate state of our knowledge, but it could also be the result of specific urban structures in Byzantium and of urban development in the late Byzantine period.

The Economic Topography of Late Byzantine Cities

A specific economic topography for late Byzantine cities is visible only in outlines and for the larger towns. Although it is very likely that many city dwellers did not live where they worked, we cannot detect anywhere a spatial separation of urban living and working spaces. The usual work space of an artisan or merchant was also in late Byzantine times the workshop, the ἐργαστήριον. Only an added explanatory word (καπηλικόν), or the replacement of the general term with a specialized one (μαγκιπεῖον [bakery], σιτοπωλεῖον [grain shop], σαρδαμαρεῖον [general store], σαπωνάριον [soap maker's and seller's], and so on) reveal whether we are looking at the production or sale of goods. Even then, some vagueness can remain, as we see from the word τζοχαρεῖον, which usually describes the shop of a cloth merchant but does not entirely rule out a workshop for the production of cloth. Alongside these solid buildings, sometimes furnished with additional storehouses for raw materials and finished goods, there were also simple tables and primitive huts and tents that provided money changers, grocers, sellers of prepared food, and probably also some small artisans with a more or less permanent and secure place of work (τραπεζοτόπια, καμάραι, μέλαθρα, σκηναί). Many, if not most, of the artisans and merchants did not own their workshops and places but only leased them, paying house and land rent to the landowning aristocrats, churches, monasteries, or the state. However, this arrangement was not unique to the Byzantine city, nor did it necessarily impede the development of trade and commerce in all late Byzantine cities.

¹⁴ *Ioannis Cantacuzeni Historiarum libri quattuor*, ed. J. Schopen, 3 vols. (Bonn, 1828–32), 1:136, 144f (I.28, 30) (hereafter Kantakouzenos).

Workshops and stores were occasionally grouped with residential houses and other buildings around a shared court, and the whole assemblage formed a small economic unit. Such units are attested in the small town of Peritheorion and in various quarters of the large cities of Thessalonike and Constantinople.¹⁵ Special artisanal quarters are mentioned only very occasionally and vaguely. From around 1330 comes information about a τοποθεσία τῶν καλιγαρίων (“quarter of the bootmakers”) undoubtedly located in the Blachernae quarter at the gate of the same name.¹⁶ However, we can at best conjecture that soldiers’ boots were actually manufactured there, and that the producers may have been settled there by the founder of the Palaiologan dynasty as part of his program to secure the recaptured capital militarily. From the same source comes a reference to a περίορος, ἔνθα καταμένουσιν οἱ κοσκινάδες, probably located in the Hep-tascalon quarter.¹⁷ We have nothing else to confirm or substantiate this reference, even though it is easy to imagine that there was a demand for the products of sieve makers in the late Byzantine economy. By contrast, there certainly was a ὁδὸς τῶν ζωνάρων or *via currigianorum* (street of belt makers)¹⁸ and a *ruga pelipariorum*¹⁹ (street of furriers) both also in the early Palaiologan period. However, both of these artisanal centers were located either at or inside the Venetian colony at the Golden Horn, which means that they were more likely set up and named as a result of Latin activities and initiatives. Patras in the Peloponnese also had a quarter or street of cobblers (*vicus seu ruga Cerdonum*),²⁰ though it, too, dated from the time of Venetian administration of the city, and we cannot say whether it continued to exist after the city passed into Byzantine hands again much later. We also hear about a χαλκευτικὴ στόα in Thessalonike,²¹ a portico of the coppersmiths, but that is virtually all we have. Although the naming of a quarter or a street after a trade does not necessarily mean that only or primarily artisans of this trade worked there, the lack of relevant references, especially when contrasted with the relatively frequent attestations from the Latin colonies after 1204, may in fact indicate a relatively low density of artisanal establishments and activities in late Byzantine cities.

What is attested, however, is a stronger concentration of urban economic life around city gates, along the harbors, and in the market squares. Various port gates of Constantinople along the Golden Horn were, in the early Palaiologan period, centers of diverse economic activity, and some of them evidently remained so until the end of the empire. Around 1340 one could find at the gate of St. John the Baptist, or in the area around this gate at the edge of the quarter of Kynegos (τῶν Κυνηγῶν), numerous money-changing booths, various shops, vegetable stalls, sites for grain selling, in addition to

¹⁵ See Ch. Bouras, “Aspects of the Byzantine City, Eighth–Fifteenth Centuries,” *EHB* 515ff.

¹⁶ H. Delehay, “Deux typica byzantins de l’époque des Paléologues,” *Memoires de l’Académie de Belgique, Classe des lettres*, ser. 2, 13/4 (1921): 93.

¹⁷ *Ibid.*, 95.

¹⁸ *MM* 3:88; Tafel and Thomas, *Urkunden*, 3:139.

¹⁹ R.-J. Loenertz, “Notes d’histoire et de chronologie byzantine,” *REB* 17 (1959): 162.

²⁰ E. Gerland, *Neue Quellen zur Geschichte des lateinischen Erzbistums Patras* (Leipzig, 1903), 203.

²¹ Bouras, “Byzantine City,” 518.

workshops, storehouses, and residential houses. At the same time at and around the gate of St. Anastasia, which is probably identical with the Μικρὰ Πύλη, the Small Gate, there were money-changing offices or booths, workshops, and some wooden houses on the offshore beach.²² At this gate began also one of the capital's large grain markets,²³ where grain coming from across the sea was unloaded. Around 1360 this area also had a bakery, in addition to other workshops.²⁴ The planned or already completed expansion of the houses situated there, their conversion into workshops and stores, and their use as money-changing stalls attest to the economic prosperity of these locations and to the efforts to make effective use of them.

The shoreline in front of this gate and other gates to the Golden Horn was virtually one continuous economic area: one specialized market abutted another, there were landing sites with storehouses, food stalls, and taverns, where ships were unloaded and loaded, where ship captains could buy provisions and shipping supplies and sailors could make their port stay a pleasant one. Behind these gates, especially in the Petrion and in the Phanari and the Kynegos quarters, were many splendid homes of the rich and noble, as we learn from the fires of 1291 and 1308. One reason these houses were so easily destroyed was that the local cisterns were being used as warehouses and treasuries, which meant there was no water to put out the flames.²⁵ The harbor of Kontoskalion on Constantinople's other seaward side and the adjoining quarter of Vlanga were surely smaller in size and much less important to the city's economic life. This port was used chiefly to build warships and to station a modest war fleet. However, merchant ships did land there, and in 1350 captain Nikolaos Petrogourgouros, who was a friend of the captain of the fleet, Phakeolatos, and had once used his commercial contacts in the suburb of Selymbria to clear a way into the capital for the rival emperor Kantakouzenos, rented a house for four years from a Venetian resident of Constantinople. Perhaps he did so to get involved in another fleet-building program of Kantakouzenos, but surely also to secure a base at the port for his own commercial activities.²⁶

Around the middle of the fourteenth century, the port of Thessalonike was also called the other, the second, city,²⁷ and the area along the seashore (τὸ πρὸς θάλατταν) was still the most densely populated part of town in the early fifteenth century.²⁸ However, it certainly could not compete with the economic zone at the Golden Horn of Constantinople, since Thessalonike's harbor still had typically medieval dimensions. It comprised only part of the city's seashore and could be accessed by no more than two

²² *Lavra*, 3:20ff (no. 123).

²³ J. Chrysostomides, "Venetian Commercial Privileges under the Palaeologi," *StVen* 12 (1970): 343 (no. 11), and cf. 323.

²⁴ *MM* 1:391ff.

²⁵ *Georgii Pachymeris De Michaelis et Andronico Palaeologis libri tredecim*, ed. I. Bekker, 2 vols. (Bonn, 1835), 1:178 (2.25), 2:582f (7.10) (hereafter Pachymeres).

²⁶ A. E. Laiou, "Un notaire vénitien à Constantinople: Antonio Bresciano et le commerce international en 1350," in M. Balard, A. E. Laiou, and C. Otten-Froux, *Les italiens à Byzance* (Paris, 1987), 127 (no. 29f); Kantakouzenos 2:601 (III.97).

²⁷ "Cydonii Monodia," 641.

²⁸ *Ioannis Anagnostae De extremo Thessalonicensi excidio*, ed. I. Bekker (Bonn, 1838), 507 (13).

city gates. We hear virtually nothing about shops, workshops, and storehouses, although they must have existed to a certain extent. Ships could be landed *infra murum*,²⁹ but we cannot say whether the shipyard that must have existed was located there. It is also an open question whether the *φόνρον τοῦ Σταυρίου* in the nearby quarter of Hagios Menas³⁰ was somehow connected with the activities at the port. And we know even less about the circumstances of other city ports. The port of Glarentza, called Hagios Zacharias, was not protected by walls but may have been secured by two towers.³¹ Presumably it had some warehouses and wine depots or wine taverns, where in 1446 the crew of a galley from Ragusa drank ten *caratelli* (small kegs) of wine to make its stay more pleasant, though the *armiraglius Chiarentiae* refused to supply them with wine for the return voyage.³²

Compared with the lively economic life at the port gates and the shoreline zones, the economic function of the gates in Constantinople's landward walls was more weakly developed; in fact, compared to earlier phases in the city's development, it may have even declined. However, there are good indications that the *porta comerci*,³³ mentioned in Latin sources from the early fourteenth century, was a gate to the immediate hinterland, surely identical with the gate where Byzantine residents of the city had to register and pay dues on the products of their suburban vineyards and gardens. There are also some indications that another large public grain market, the *locus secunde Raybe*, was not located at the gate near Pegai at the Golden Horn, but at the civic gate of Pege, its chief purpose being to receive grain supplies from the Thracian hinterland.³⁴ Some of the economic installations along the land wall and its gates presumably combined civilian and military functions, as for example the smithy near the gate of Charisios or Adrianople gate, whose proprietor complained about bad business during the siege of the city in 1402.³⁵ In the early Palaiologan period there were also many booths and tents in front of the city wall, and they formed, also on the land side, something like suburban settlements with certain economic functions, though we are not able to determine their character more precisely. During the final decades before the fall of Constantinople, the landward side, and especially the Adrianople gate, seem to have attained once again greater economic importance: trading links with the Ottoman capital that was beginning to thrive in the Thracian interior functioned reasonably well from time to time and offered the Byzantine customs authorities opportunities for additional revenue.

²⁹ Tafel and Thomas, *Urkunden*, 3:177.

³⁰ *Actes de Chilandar*, ed. L. Petit (= *VizVrem* 17 [1911], appendix; repr. Amsterdam, 1968), 60, 62 (no. 27).

³¹ *Cronaca dei Tocco di Cefalonia di anonimo*, ed. G. Schirò (Rome, 1975), v. 587f and 596, 262: εἰς τὰ Δίπρυγα; cf. O. J. Schmitt, "Zur Geschichte der Stadt Glarentza im 15. Jahrhundert," *Byzantion* 65 (1995): 123f.

³² B. Krekić, *Dubrovnik (Raguse) et le Levant au Moyen Age* (Paris, 1961), 352 (no. 1119).

³³ G. M. Thomas and R. Predelli, *Diplomatarium Veneto-Levanticum*, 2 vols. (Venice, 1880–99), 1:165 (no. 80).

³⁴ Chrysostomides, "Venetian Commercial Privileges," 343 (no. 11), and cf. 323.

³⁵ MM 2:326ff.

The few bits of information about the gates of Thessalonike do not yet provide a coherent picture regarding their role in the city's economic life during the late Byzantine period. Gates may have had even more economic importance for landlocked cities without communication links across the sea and without ports and port gates. That is certainly the case for the βασιλικὴ πύλη, which separated the ἐμπόριον τῶν Σερρῶν from other parts of the city. The city's main street ended here, and here were also various workshops and bakeries, assuming that the "imperial gate" was identical with the πύλη τοῦ φόρου ("market gate").³⁶ We can say even less about the gate τοῦ Βαρέως, which separated the city (ἄστυ) of Adrianople from the *emporion* (τῷ κατ' αὐτὴν ἐμπορίῳ); in 1307 the residents themselves torched and destroyed it when the Catalans were approaching.³⁷

Of economic importance to the late Byzantine cities were also the settlements of various socioethnic subgroups, especially those of the Jews. Although the Jewish subjects of the empire suffered some legal and social restrictions, they clearly participated in the economic life of the state.³⁸ Jewish immigration after the end of Latin rule may have been part of Emperor Michael VIII's efforts to resettle his capital and revive it economically.³⁹ Under the first Palaiologan emperors, the Jewish quarter of Constantinople was moved back into the interior of the city, to the Vlanga section, in the part of the city facing the Sea of Marmara. In the early years of the Palaiologan period, the Jewish quarter, with a synagogue and its own walls and gates, made a name for itself especially as a center for the processing of furs and skins;⁴⁰ however, since the foul odors emitted by this type of work plagued the surrounding Christians—clerics and laity—the Jews who engaged in this trade made many influential enemies. Certainly not all residents of the Jewish quarter were tanners and furriers, but we have no concrete evidence for Jewish textile production from the late Byzantine period. Nor can we say with certainty whether the Byzantine Jews who are attested in the early fifteenth century in Constantinople as moneylenders and merchants still lived in the Vlanga.

Jewish communities are also attested in other late Byzantine cities, for example in the port cities of Ainos and Mesembria and in the inland cities of Adrianople, Zichna, and Mistra. However, we know next to nothing about the type of settlements they were and the kind of activities their residents pursued. Thessalonike had a special Jewish quarter similar to that in Constantinople. Probably located in the western quarter of Omphalos, it was destroyed by fire prior to 1420.⁴¹ While we hear complaints from the

³⁶ Cf. A. E. Laiou, "Κοινωνικές δυνάμεις στὶς Σέρρες στὸ 14ο αἰῶνα," in *Οἱ Σέρρες καὶ ἡ περιοχὴ τους ἀπὸ τὴν ἀρχαία σὴ μεσαβυζαντινὴ κοινωνία* (Serres, 1998), 8, 15.

³⁷ Pachymeres 2:603f (VII.19).

³⁸ D. Jacoby, "Les Juifs de Byzance: Une communauté marginalisée," in *Οἱ περιθωριακοὶ στὸ Βυζάντιο* (Athens, 1993), 133.

³⁹ D. Jacoby, "The Jews of Constantinople and Their Demographic Hinterland," in *Constantinople and Its Hinterland*, ed. C. Mango and G. Dagron (Aldershot, 1995), 228.

⁴⁰ D. Jacoby, "Les quartiers juifs de Constantinople à l'époque byzantine," *Byzantion* 37 (1967): 168–83.

⁴¹ N. Oikonomides, *Actes de Dionysiou* (Paris, 1968), 112 (no. 19).

city's bishops in the twelfth century that Jews were spreading beyond the confines of this quarter, in the early fifteenth century, at least, the number of Jews in Thessalonike declined sharply,⁴² and the remnants of the community that lasted beyond Venetian rule were resettled to Constantinople by Mehmed the Conqueror in 1453 or shortly thereafter.⁴³ In Thessalonike, much as in the capital, there was a special official for litigation between Jews or for legal demands against Jews.⁴⁴ As in Constantinople, these legal quarrels no doubt also concerned economic matters, deliveries of goods, and demands for money. However, there is no concrete mention of or evidence for either Jewish merchants or Jewish artisans during the various periods of late Byzantine rule over Thessalonike.

The economic life of the late Byzantine capital was much more strongly influenced, and in many respects even dominated, by numerous Latin bases and quarters. To be sure, after the Byzantines regained control of the capital, the dominant position of the Venetians in the city at the Golden Horn was seriously shaken up for a brief moment, and its very survival was at stake. But as early as 1277 the Venetians were able to regain through a treaty their old quarter between the Drungarios and Perama gates: it included a *palatium* as the seat of their *bailo*, a *loggia* or *banchus juris*, several churches, among them a church of St. Mark as the parish church for the Venetian community and its representatives and a church consecrated to St. Akindynos, in which the official weights and measures for their commercial activities were deposited, and twenty-five houses provided free of rent and others for rent.⁴⁵ Supported by renewed exemptions from tolls and free trading areas, and by a core of permanent residents, the Venetians were able to turn this colony into the center of their economic activities in Constantinople and its environs. Through this colony they played a very significant role in shaping the economic rhythm of the city, especially through trade but also artisanal activities, pursued chiefly by naturalized and protected groups of people from all over the Levant and Romania.⁴⁶ Venetian *cives* and *fideles* did not restrict themselves to the colony but owned and rented houses all over the city.

From the end of the thirteenth century, Jewish newcomers were living under the protection of the Venetians in or near the Venetian quarter. Some time before 1319 they were able to negotiate an agreement with the Byzantine Jews in the Vlanga quarter on how to divide the labor in the exercise of their trades, and to obtain from the Byzantine authorities permission to resettle in the quarter at the Sea of Marmara (the quarter of the Byzantine Jews) and work "in eorum curiis siue locis." They were

⁴² N. Jorga, *Notes et extraits pour servir à l'histoire des croisades au XVe siècle*, 2 vols. (Paris, 1899), 1:496.

⁴³ H. W. Lowry, "From Lesser Wars to the Mightiest War': The Ottoman Conquest and Transformation of Byzantine Urban Centers in the Fifteenth Century," in *Continuity and Change in Late Byzantine and Early Ottoman Society*, ed. A. Bryer and H. Lowry (Birmingham-Washington, D.C., 1986), 333f.

⁴⁴ *PRK* 2:104–17 (no. 111); cf. F. Dölger, "Zur Frage des jüdischen Anteils an der Bevölkerung Thessalonikes im XIV. Jahrhundert," in *Παρασπορά* (Ettal, 1961), 378–83.

⁴⁵ *MM* 3:88.

⁴⁶ Cf. D. Jacoby, "Les Vénitiens naturalisés dans l'Empire byzantin: Un aspect de l'expansion de Venise en Roumanie du XIIIe au milieu du XVe siècle," *TM* 8 (1981): 217–35.

probably also given land to build their own houses.⁴⁷ However, the Byzantines soon began repressive measures against the “Venetian” Jews: imperial officials (*factores Imperii*) confiscated their work material, destroyed some of their skins and furs, and exported the rest.⁴⁸ Eventually the victims of these attacks withdrew once again to the protection of the Venetian colony. The reason for these measures, apart from the exemption of the “Venetian” Jews from dues, was growing profit for the Byzantine Jews at the expense of the Byzantine treasury, and behind it all was the perhaps even greater danger of an expansion of Venetian influence to more parts of the city at the expense of Byzantine sovereignty. However, the Jewish section in the Venetian quarter flourished in the late Byzantine period, so much so that the houses of the Jews and their wealth, in particular, caught the eye of the plundering Turks in 1453.⁴⁹

In addition to the Venetians, the Pisans, Catalans, and other cities and states of the Latin West also had bases in the late Byzantine capital, through which they exerted influence on the economic life of the city. These foreign communities, too, were governed internally and represented externally by their own consuls, exarchs, and so on. Their members, too, had commercial privileges that gave them an advantage over native trade and commerce. They, too, were in contact with their home cities and countries through intensive maritime traffic and organized ship convoys. Their presence further constricted the Byzantine sphere of action, though they never became serious competition for the Venetians.

All these western communities and their bases inside Constantinople were overshadowed in their influence on the city’s economy by the Genoese settlement outside the city boundaries on the other shore of the Golden Horn. The Byzantines had laid out this settlement with the intention of keeping this more recent ally at a greater distance than the Venetians, and playing the two great Latin competitors off against each other by having them face each other across the narrow inlet. With the allocation of the area of Galata around the year 1268, the Genoese in fact had the chance to build up a separate colony in immediate proximity to the capital. This colony soon grew beyond the usual ensemble of *loggia*, church, bakery, and a limited number of houses, and developed into a fortified suburb where merchants and artisans settled permanently and another Jewish community found a home under Genoese protection. Outside the colony was an ideal place for a harbor, and as early as the middle of the fourteenth century, more ships were dropping anchor here than at the capital’s landing sites.

As a result of this development, the entrance to the Golden Horn was dominated and shaped by Latin colonies with economic structures that had a strong western imprint. Byzantine economic forces, facilities, and institutions, meanwhile, were pushed into the back section of the port, and some moved to the urban regions along the shore of

⁴⁷ Thomas and Predelli, *Diplomatarium*, 1:142f (no. 77); cf. E. Kislinger, “Jüdische Gewerbetreibende in Byzanz,” in *Die Juden in ihrer mittelalterlichen Geschichte*, ed. A. Ebenbauer and K. Zatloukal (Vienna, 1991), 107.

⁴⁸ Thomas and Predelli, *Diplomatarium*, 1:153 (no. 78).

⁴⁹ Nicolo Barbaro, *Giornale dell’assedio di Costantinopoli 1453*, ed. E. Cornet (Vienna, 1856), 56.

the Sea of Marmara. In this way the increasing dependence of Byzantine merchants and artisans on western wares and trading convoys, on western capital, connections, and economic rhythms also manifested itself topographically. At the same time, however, this created special opportunities to purchase such wares, use these ships, participate in the movement of capital, insert oneself into these commercial connections, and adapt to these rhythms. And before the empire fell, at least some Byzantine economic powers were able to take advantage of these opportunities, even if only to a limited extent.

Western economic forces were not able to secure the same kind of advantageous positions in the city of Thessalonike. The Venetians clearly had the strongest presence and position. The city had consuls of the Venetian Republic nearly throughout the entire late Byzantine period. Venetian merchants owned city houses in which they pursued their activities with their employees (*pueri*).⁵⁰ They controlled their own measures (and weights) in the city's harbor.⁵¹ Venetian *fideles* were also found in this large Macedonian city.⁵² However, the Venetians do not seem to have had a separate quarter or their own church. In response to demands for (more) housing and shops, the Byzantine authorities offered them only "domus parve": according to the Venetian spokesmen, these places were not fit for living and could only be rented to people who sold fish and similar goods. The export of grain, peas, beans, and other produce was not permitted. The Venetian consuls were blocked in various ways in their efforts to gain control of the trade with certain foodstuffs and raw materials and had to take large financial losses. Their legal jurisdictions and authorities were not respected by the Byzantines and were constantly undercut.⁵³

Even contacts with the Ragusans, who were at times very active in the city, do not seem to have substantially improved the position of the Venetians in Thessalonike. It appears that the Genoese, however, were able to gain even less influence in the city, even though it has now been shown that they did build up a small colony in Thessalonike, that they had their own consul in the city at least for a time, and that they made various investments in local businesses.⁵⁴ By contrast, no concrete evidence has so far been found for the establishment of a consulate in the small town of Kassandreia, reserved for that purpose by the treaty of Nymphaion.⁵⁵ Apparently other Latins were not able to form ethnic communities in Thessalonike. We cannot entirely rule out the possibility that Venetians, Ragusans, and Genoese settled permanently in the city either individually or even in groups, and that they pursued artisanal activities alongside commercial work much as they did in Constantinople, but this is not very likely.

⁵⁰ Tafel and Thomas, *Urkunden*, 3:168.

⁵¹ Thomas and Predelli, *Diplomatarium*, 1:134: "mensura Veneta, que permanet ad portum dicte terre" (i.e., Thessalonike).

⁵² Thiriet, *Délibérations*, 1:305.

⁵³ Thomas and Predelli, *Diplomatarium*, 1:134 (no. 75) and 166 (no. 80).

⁵⁴ M. Balard, *La Romanie génoise: XIIe-début du XVIe siècle*, 2 vols. (Rome, 1978), 1:164.

⁵⁵ Cf. I. Ševčenko, "The Zealot Revolution and the Supposed Genoese Colony in Thessalonica," in Προσφορά εις Στ. Κυριακίδη (Thessalonike, 1953), 603–17.

The empire's second city was thus spared the domineering western influence on its economic life and was able to preserve a larger sphere of action for domestic economic elements. During the Palaiologan period, Thessalonike was, more so than Constantinople, the center for a genuine Byzantine economic development, a refuge for Byzantine independence and Byzantine pride. However, the consequence of this seems to have been that the city's economic life took on stronger conservative features, that the new opportunities and forms of economic activity were less readily accepted and embraced, and that the city at the foot of Mount Chortiates did not exude the same kind of economic energy one could feel on the shores of the Golden Horn.

Finally, commercial elements from the Islamic world also played a traditional role in Byzantine cities. When Constantinople reverted to Byzantine control in 1261, the first Palaiologan rulers evidently did not have much difficulty granting Muslim merchants permission to build a new mosque⁵⁶ and assigning them a separate quarter in the city,⁵⁷ over the opposition from some circles in the Orthodox church. Over the course of the fourteenth century, this colony seems to have taken on an increasingly Turkish flavor and was eventually entirely directed by the Ottomans. However, Ottoman involvement in the life of the capital tended to be political rather than economic in nature; from the end of the fourteenth century, it was above all sailors and soldiers alongside merchants who stood under Ottoman protection in the city and its Byzantine environs.⁵⁸ We cannot say yet to what extent Islamic commercial practices were established and enforced in Constantinople with the Turkish *kadi*. Whether Islamic commercial installations spread in Constantinople before 1453 also remains an open question.

The first Turkish interlude in Thessalonike from 1387 to 1403 undoubtedly left behind stronger traces in the city's economic life, but we do not know as much about that as we do about the *axappi* and *janisperi* who lived in the city already before the final Turkish conquest in 1430.⁵⁹ The economic infiltration of a Byzantine city prior to its conquest by the Turks had undoubtedly progressed farthest in Philadelphia in Asia Minor, but that was the result of very special circumstances, discussed below.

The Urban Hinterland and Its Importance for the Economy of Late Byzantine Cities

Turkish pressure on the late Byzantine urban economy was more likely to come from the countryside than from within the city and to be much stronger when it did so. Late

⁵⁶ A.-M. Talbot, *The Correspondence of Athanasius I, Patriarch of Constantinople: Letters to the Emperor Andronicus II, Members of the Imperial Family, and Officials* (Washington, D.C., 1975), 84 (no. 41), 350; M. M. Tahar, "La mosquée de Constantinople à l'époque byzantine d'après un manuscrit arabe (BN de Paris)," *Βυζαντικά* 11 (1991): 117–27.

⁵⁷ M. Izeddin, "Un texte arabe sur Constantinople byzantine," *JA* 246 (1958): 453–57.

⁵⁸ K. Kreutel, *Vom Hirtenzelt zur Hohen Pforte. Frühzeit und Aufstieg des Osmanenreiches nach der Chronik: Denkwürdigkeiten und Zeitläufe des Hauses Osman vom Derwisch Ahmed, genannt 'Aşik Paşa-Sohn* (Graz, 1959), 100 (chap. 61), 113 (chap. 67).

⁵⁹ Jorga, *Notes*, 1:439.

Byzantine cities remained tied to the countryside legally because no real urban civic rights had developed by the end of the empire. Cities were linked to the countryside administratively since the authority of the city governors also extended to more or less large segments of the surrounding lands. Cities had social ties to the countryside especially because the big aristocratic landowners lived in the cities, but there were other links as well. Finally, cities were linked with the land economically because the division of labor between city and countryside was relatively weak, and because the peasants produced most of the state taxes from which the cities also lived, since that is where they were spent.

The hinterland was therefore precious to Byzantine cities, but it was fundamentally and permanently threatened by the westward expansion of the Turks and the occupation of land by nomads and peasants of new Turkoman tribes, as early as the end of the thirteenth century in western Asia Minor, and from the middle of the fourteenth century also in the Balkans. For example, as early as 1290 the city of Bilecik, probably Byzantine Belokoma, was so thoroughly surrounded by the Turks of the *beg* Osman that even his wife was not able to reach the city for the wedding of the city's governor. On the other hand, the women of the city's potters and their wares were welcome visitors at the market of the Ottoman-ruled city of Dorylaion/Eskişehir. They enjoyed direct protection from the lord of the market and were effectively shielded against Turkish harassment. Turkish interest in the craft products of the Byzantine city secured its artisans a continued market for their wares; in fact, it seems to have motivated them to expand their production. It is possible that cloth making also profited from this interest, since the white caps in which Osman dressed his soldiers were ordered from Bilecik; although this probably did not happen until after the Turkish occupation of the city, there was undoubtedly continuity with a local artisanal tradition. At times seminomadic Turkoman cattle herders and warriors also used the fortified Byzantine city to store their tools and valuables while they were out on summer pastures.⁶⁰ Thus there was not only a heightened demand for artisanal products, but also an increased concentration of material goods in the Bithynian city.

The Lydian city of Philadelphia in the fourteenth century also shows that relations between Byzantine city dwellers and Turkish land dwellers were not necessarily characterized only by hostility and armed conflict. They could also be influenced by multifarious economic and social contacts. In a letter from the 1320s, Manuel Gabalas, a church official from Philadelphia and the future metropolitan Matthew of Ephesos, gave two reasons why towns (πολίσματα) in this far-off region in the midst of Turkish enemies were still under Byzantine control: "first, because of their fortifications, and (second) because they always find a way to get along with their enemies. This has created such a relationship of trust between them that our people for a very long time now have been holding all the gold and silver the others own in trust for them, all their Persian

⁶⁰ Kreutel, *Vom Hirtenzelt*, 32, 65, 23. A. Gallotta, "Il 'mito oguzo' e le origine dello stato ottomano: Una riconsiderazione," in *The Ottoman Emirate, 1300–1389*, ed. E. Zachariadou (Rethymnon, 1993), 52.

belts, rugs, precious mantles, and robes. And there is agreement that neither the emperor nor the military commanders who are appointed from time to time are allowed to appropriate these things.”⁶¹ Fifteenth-century Turkish statements about Belokoma/Bilecik, not entirely unproblematic from a historiographical point of view, are thus confirmed by a Byzantine source that is much closer chronologically. Moreover, what also becomes visible is a very specific economic dimension to the limited autonomy of these cities: the Byzantine emperor and his military officials had no right to question or destroy the economic basis of cooperation between Byzantine subjects and Turkish occupiers. The Byzantine state, pushed out of Asia Minor, subsequently had very little choice but to ask Turkish rulers for a peaceful relationship with the enclave of Philadelphia and plead for an exemption from tribute payments. However, the success of these diplomatic interventions was extremely limited in substance and duration. Much more important to Philadelphia’s continued existence as a Byzantine city was a continually revived will to resist repeated attempts to conquer it, combined with an intensification of cooperation on various levels, especially the economic one. The construction of a mosque in Philadelphia indicates that from the middle of the century the city served not only as a depository for Turkish property but also as the residence of Muslim subjects of Turkish rulers. It was probably this cooperation that made possible the upswing in the city’s textile production and was in turn strengthened by it. Red silk from Alasehir (Philadelphia) gained fame in a larger economic sphere already toward the end of the fourteenth century,⁶² but many of the people who bought it surely came from among the Turks who lived in the surrounding area. There are also traces of leatherworking and references to the production of military paraphernalia,⁶³ and the Turkish countryside was undoubtedly interested in both. In the words of the historian Doukas, for more than a century the city shone like a star in a cloud-darkened sky, remaining unusually large and populous.⁶⁴

Difference in size and a stronger will to resist are not the only reasons why Philadelphia outlived Belokoma as a Byzantine city for nearly one hundred years. It also had to do with the fact that at the end of the thirteenth century the Bithynian city lay right in the path of the main thrust of expansion by the young Ottoman emirate, while the Lydian city, from the middle of the fourteenth century, at the latest, found itself in the shadow of that expansion. The Turkish expansion in Europe that began at this time was driven by a much more consolidated and enlarged Ottoman state. This state did not bother much longer with encircling Byzantine cities and undermining them economically, but moved swiftly to absorb them politically. Being cut off from their hinterland was a profound shock to the Thracian and Macedonian cities, so much so that

⁶¹ Reinsch, *Die Briefe*, 391 (A 18).

⁶² I. Beldiceanu-Steinherr, with P. Năsturel, “Notes pour l’histoire d’Alasehir (Philadelphie) au XIV^e siècle,” in *Philadelphie et autres études* (Paris, 1984), 17–37.

⁶³ Theodore II Laskaris, “Encomium on the City of Nicaea,” PG 140:1345; G. Fatouros, *Die Briefe des Michael Gabras, ca. 1290–nach 1350*, 2 vols. (Vienna, 1973), 2:118 (no. 72), 142f (no. 87). Cf. P. Schreiner, “Zur Geschichte Philadelphieas im 14. Jahrhundert (1293–1390),” *OCF* 35 (1969): 411f.

⁶⁴ *Ducæ Historia Turcobyantina*, ed. by V. Grecu (Bucharest, 1958), 41 (IV.3).

many of them surrendered without putting up much resistance for any length of time. But in the European parts of the empire, as well, strategic military goals affected the course of city conquests and the duration of resistance. For while fewer than twenty years separate the first appearance of the Turks outside the walls of Thessalonike from the first Turkish conquest of the city, the same interval lasted more than a century in the case of Constantinople. Among the many reasons for this difference is the fact that the Ottomans ignored the capital after their initial attempts to take it had failed. Eventually they got so used to its presence that Sultan Mehmed had to impose his plans of conquest over strong opposition from within his own ranks. For some of the opponents of the plan, the city had by now also become an access point to the economic world of the Italians, and, like a small circle of late Byzantine entrepreneurs, they tried to participate in it. These entrepreneurs had long since bid farewell to a flourishing urban hinterland, to large estates with many peasants, concentrating entirely on the city and the sea and its economic energy. At least for a short time, this would prove a viable basis on which to carry on, for some even a basis for their very survival.

Banking and Its Role in the Late Byzantine Cities

As I have already emphasized, in the late Byzantine period the city continued to be the place where the material goods of society flowed together, where the struggle over their distribution took place and decisions about their allocation were made. All propertied classes of late Byzantine society made active use of the possibility of lending money at interest: officials and landowners, clerics and monks, but also merchants and artisans and even servants and peasants. At the same time, however, there also existed during this period a group of professional money dealers and moneylenders. The terms that are used in the sources to describe them—καταλλάκτης, κερματιστής, ἀργυροκόπος, ἀργυραμοιβός, and δανειστής⁶⁵—indicate that these individuals were primarily money changers and usurers. The classic term *τραπεζίτης*, which describes the money dealer proper in his late Roman and even early Byzantine incarnation,⁶⁶ is known only from one literary source in the late Byzantine period;⁶⁷ it thus appears to have fallen completely out of use in economic life, like the term *ἀργυροπράτης* before it. In the Latin sources, Byzantine *bancherii* appear as early as the late thirteenth century,⁶⁸ though we are not able to determine whether these individuals were simple money changers or more.

⁶⁵ Cf. S. Kugeas, "Notizbuch eines Beamten der Metropolis von Thessalonike aus dem Anfang des XV. Jahrhunderts" *BZ* 23 (1914–15): 150, 153; *Ioannis Canani De Constantinopoli anno 1422 oppugnata narratio*, ed. I. Bekker (Bonn, 1838), 464; *Manuelis Philae Carmina*, ed. E. Miller, 2 vols. (Paris, 1855/57), 2:181; 1:457f; *PRK* 1:428, 438, 450, 452; 2:440, 442.

⁶⁶ Cf. *ODB* 1:250.

⁶⁷ *Philae Carmina*, ed. Miller, 2:181. The alleged *logothetes tou genikou* and *trapezites* Jannis Androuses around 1380 is, according to E. Trapp (personal communication, February 1984), misplaced in *PLP Addenda*, 10 (no. 90111).

⁶⁸ Cf. G. I. Bratianu, *Actes de notaires génois de Péra et de Caffa de la fin du XIII siècle* (Bucharest, 1927), 164.

Late Byzantine society was highly critical not only of usury⁶⁹ but also of money changing. For example, the writer Alexios Makrembolites, in a poem from the mid-fourteenth century, denounced the fraudulent practices of a money changer (in the capital) and at the same time mocked his ingratiating “si” and constant “fatte,” which he had acquired in his close dealing with Italian clients and used to show off in front of his own people.⁷⁰ So-called καταλλακτικά τραπέζια or τραπεζοτόπια, already known from the middle Byzantine period,⁷¹ were found in Constantinople at various city gates, on the Mese, and perhaps in other business thoroughfares as well,⁷² and in Thessalonike near the port of the city in the quarter of St. Menas.⁷³ Some belonged to members of the urban middle class, but for the most part they were in the hands of various aristocratic families and large monasteries, which generally rented them out.⁷⁴ It appears that these “money-changing tables” or “places” for them were small, more like booths or add-ons to other buildings rather than permanent houses or larger rooms inside such houses.⁷⁵ Professional money dealers on a larger scale and with greater influence are mentioned by the usurper John Kantakouzenos when he seized power in the capital in early 1347: a number of the money changers who did business in their shops (ἐκ τῶν ἐν ἐργαστηρίοις ἐμπορευομένων ἀργυραμοιβῶν) tried to sabotage

⁶⁹ Cf. M. A. Poliakovskaia, *Portrety vizantiiskikh intellektualov* (Ekaterinburg, 1992), 129ff, where the findings of older works about the treatises of Nicholas Kabasilas against usury are summarized. Cf. also A. E. Laiou, “The Church, Economic Thought and Economic Practice,” in *The Christian East: Its Institutions and Its Thought. A Critical Reflection*, ed. R. F. Taft, S. J. (Rome, 1996), 454ff, who shows that the Orthodox Church in the 14th century, in the face of an intensifying social crisis and social polarization, developed positions on money lending, trade, profit, and the involvement of clerics and monks in these spheres of economic activity that were even more rigorous than they had been in earlier periods of Byzantine history.

⁷⁰ *Philae Carmina*, ed. Miller, 1:457f. On the back of the folio from the 15th-century Florentine manuscript that contains this poem, we find the name Ἀλέξιος ὁ Ἀτζικαντήλης. Cf. A. M. Bandini, *Catalogus codicum manuscriptorum bibliothecae Mediceae Laurentianae* (repr. Leipzig, 1961), 2:172. This might be a reference to the identity of the anonymous individual attacked in the poem, especially since a Tzykandyles is attested around 1340 as the owner of a money-changing booth at one of the gates to the Golden Horn. *Lavra*, 3:24.

⁷¹ Rhalles and Potles, *Σύνταγμα*, 4:469; Zepos, *Jus* 3:492f; Dölger, *Regesten*, 2:69 (no. 1384); cf. A. E. Laiou, “God and Mammon: Credit, Trade, Profit and the Canonists,” in *Tó Byzántio κατά τόν 12ο αἰῶνα*, ed. N. Oikonomides (Athens, 1991), 290f. On the middle period, see G. Dagron, “The Urban Economy, Seventh–Twelfth Centuries,” *EHB*, 424ff.

⁷² *Lavra*, 3:24f; P. Merimée, *Etude sur les arts au Moyen Age* (Paris, 1843), 356; cf. M. J. Siuziumov, *Vizantiiskaia kniga Eparkha* (Moscow, 1962), 144.

⁷³ MM 2:525 (no. 664).

⁷⁴ The money-changer booths and locations that came into the possession of the monastery of Lavra in 1342 had earlier belonged to individuals with very “middle-class” names. However, among the sellers was also one Pinkernissa Palaiologina, a relative of the imperial house. *Lavra*, 3:24f.

⁷⁵ P. Schreiner, *Texte zur spätbyzantinischen Finanz- und Wirtschaftsgeschichte in Handschriften der Bibliotheca Vaticana* (Vatican City, 1991), 410 n. 353, believes that these were places of work for both money changers and “real” bankers. However, according to A. Kazhdan (*ODB* 1:250), these shops were small. Around 1400 in Thessalonike, the leaseholder of two changing tables (τραπέζια) that were located next to an ointment shop or perfumery connected them to the shop by creating an access to the tables from the shop καὶ ποιήσῃ μίαν προβολήν, καὶ ἀντὶ καταλλακτικῶν μυρεψικῆν προβολήν ἀποτελέσῃ αὐτά (MM 2:516 [no. 666]).

his plan to levy a special tax on his new subjects.⁷⁶ The passage clearly seeks to say that these “money changers” were not people behind simple changing tables, but owners or operators of banking businesses, who had very specific business premises, one could almost say they had real business offices. The fact that the chronicler and former emperor does not speak of *τραπεζίται* in this passage supports the conjecture that this traditional occupational term was in fact no longer in use in his day. The reason for the noticeable absence of this term could only have been that the traditional meaning of the term no longer corresponded to the concrete circumstances in the middle of the fourteenth century, and no longer did justice to the realities of financial business in the empire, which had been changed by the presence of the Italians.

These late Byzantine bankers become more clearly visible toward the end of the fourteenth and in the early fifteenth century. A banker named Manoli Frangalexi/es was active in Constantinople and Pera between 1391 and 1402. On various occasions he sold gold and silver bullion to the Genoese authorities. He was evidently well-off, for he had his own church or chapel with a priest who received, or was supposed to receive, a house from him in return for his services.⁷⁷ The official from the metropolis of Thessalonike who has been mentioned above, and whose identity is still unknown, had dealings with a woman pawnbroker from the well-known and influential Rhadenos family and with two money changers (*καταλλάκται*), also from respected circles in the city, in connection with his work for the church and in his private life.⁷⁸ When the Venetians took over Thessalonike, he resettled in Constantinople, while his family initially stayed behind. From the capital he sent his family the funds it needed by way of cashless transfers. These transfers were handled by two *archontes* from the capital, in whose shops the official had to appear several times, and by their business partner in Thessalonike, of whom, however, we know nothing beyond his name.⁷⁹ The income from a new benefice in the capital, granted by the emperor himself, was occasionally delivered by a money changer named Mankaphas acting on behalf of an *archon* named Galiotos. The latter seems to have been active as a secretary (*γραμματικός*) and had an important role in the distribution of the income of the benefice without receiving any profit himself.⁸⁰ In order to fulfill his official obligations and take care of his family's needs, this interesting late Byzantine anonymous official was able and forced to call on the services of a woman pawnbroker, several money changers, and various bankers in Constantinople and Thessalonike.

⁷⁶ Kantakouzenos, 3:40 (IV.6).

⁷⁷ Balard, *La Romanie génoise*, 1:271; MM 2:339 (no. 541); cf. A. E. Laiou, “The Byzantine Economy in the Mediterranean Trade System: 13th–15th Centuries,” *DOP* 34 (1980): 221.

⁷⁸ On the Rhadenos family, cf. K.-P. Matschke, *Die Schlacht bei Ankara und das Schicksal von Byzanz* (Weimar, 1981), 167f. A Platyskalites may have been city commander in Thessalonike when the city was handed over to the Venetians in 1423; cf. A. Vacalopoulos, *A History of Thessaloniki* (Thessalonike, 1972), 64. The second *katallaktes*, named Chalatzes, had family ties with the Platyskalites; cf. Kugeas, “Notizbuch,” 153.

⁷⁹ Kugeas, “Notizbuch,” 148f; cf. Schreiner, *Texte*, 409 n. 348.

⁸⁰ Kugeas, “Notizbuch,” 150.

The Venetian merchant Giacomo Badoer also handled his business dealings in Constantinople between 1436 and 1440 through various Greek bankers. Much like Badoer's Venetian house bank Carlo Capello and other banks operated by Italians in the Byzantine capital, they functioned primarily as *banchi di scrit(t)a*,⁸¹ transferring funds from his debtors into accounts he held with them and receiving payment on account from his customers. In addition, they also helped him with exchange transactions and provided all the essential services that the modern banking business as developed by the Italians had to offer by this time.⁸² Badoer had simultaneous commercial relations especially with "chir Chostantin Critopulo [Kritopoulos] dal banco" or "de la zeca":⁸³ he sold him soap from Gaeta and cloth imported from different places and of varied quality, and procured from him a large batch of raw silk.⁸⁴ When the Greek banker (and merchant) went bankrupt in early 1439, a seven-year schedule of compensation for his creditors was set up in accord with a decision by the Venetian *bailo* in Constantinople.⁸⁵ When Badoer left the Byzantine capital prior to the end of this seven-year period, he ceded his claim to the Greek banker Nicolo Sufiano for 30% of its nominal value.⁸⁶ It was with Sufiano that Badoer had set up an account immediately upon his arrival at the Golden Horn. Among the Greek bankers in Badoer's account book, Sufiano held first place in terms of the volume of his business transactions, and he was a respectable fourth in the list of all money dealers with whom Badoer had business ties.⁸⁷

Apart from the banking entrepreneurs Sophianos, Sardinios, and Kritopoulos, a variety of smaller bankers (*più bancharoti*) also appear in Badoer's business records,⁸⁸ among them one Franchopulo (Phrangopoulos) and one Xatopulo (Xanthopoulos). However, it seems that they, too, were not simple money changers, but performed other services for their clients as well.⁸⁹ Finally, Badoer took out larger sums from local moneyed men as loans (*per imprestado* or *oxura*): for instance, 600 hyperpera from a certain Lascari Teologo at a yearly interest rate of 10%,⁹⁰ and about the same sum from the Jew Elia de David at 12 or 14%.⁹¹ In each case he deposited as a security several

⁸¹ Occasionally Badoer himself uses this term; see G. Badoer, *Il libro dei conti: Costantinopoli, 1436–1440*, ed. U. Dorini and T. Bertelè (Rome, 1956), 362 (hereafter Badoer).

⁸² Cf. N. Oikonomides, *Hommes d'affaires grecs et latins à Constantinople: XIIIe–XVe siècles* (Montreal, 1979), 66f.

⁸³ On his role in late Byzantine minting see K.-P. Matschke, "Münzstätten, Münzer und Münzprägung im späten Byzanz," *RN* 152 (1997): 191–210.

⁸⁴ On the business activities of Kritopoulos, see M. M. Shitikov, "Konstantinopol' i venetsianskaia trgovlia v pervoi polovine XV. v. po dannym knigi shchetov Dzhakomo Badoera," *VizVrem* 30 (1969): 55f.

⁸⁵ Badoer, 584.

⁸⁶ *Ibid.*, 796.

⁸⁷ Cf. the list in Shitikov, "Konstantinopol'," 55.

⁸⁸ Badoer, 96.

⁸⁹ Cf. Badoer, 96, 153, 178, 371, 656. Incidentally, the Venetian merchant Badoer describes them on one occasion as *banchieri* and then again as *banchari* or *bancharoti*. Apparently he was not clear himself on the nature and extent of their activities.

⁹⁰ Badoer, 646f.

⁹¹ *Ibid.*, 313.

bales of cloth, some of which bore his seal.⁹² Alongside pawnbrokers and money changers we thus find a variety of late Byzantine bankers who had real banking businesses and engaged in modern banking activities. And much like their western models and senior partners, they combined money business with commerce, thus breaking free from traditional Byzantine limitations and restrictions and developing into real entrepreneurs of early Mediterranean capitalism.

These late Byzantine financial institutions undoubtedly did not attain the entrepreneurial stature and geographic range of the large Italian banks, and so far they have only been solidly attested in the large cities of Constantinople and Thessalonike. In smaller towns where there were no banks and probably no professional money changers either, merchants (local or transient) occasionally took their place and, before witnesses, exchanged large coins for small ones and vice versa.⁹³ Money changers are also attested among the camp followers of besieging armies,⁹⁴ and they were undoubtedly a presence at fairs. Pawn transactions and usury were found everywhere, for example in the small Thracian town in which the young Demetrios Kydones in 1346 witnessed the brutal actions a creditor took against a debtor.⁹⁵ The political decline of the empire and the constant sieges laid against its cities drove not only simple folk but even many aristocrats into the arms of the usurers, forcing them to borrow money at high and rising interest rates to support themselves,⁹⁶ and to use their property and mobile assets as a security and relinquish them if they were unable to meet the contractual repayments.⁹⁷ In addition to this consumption credit, however, money was also borrowed against security to purchase and lease houses and workshops,⁹⁸ to acquire and improve productive land,⁹⁹ to invest the borrowed money in speculative business deals,¹⁰⁰ and

⁹² Ibid., 647.

⁹³ One such case, which may have occurred in the city of Polystylon/Abdera, is documented in Schreiner, *Texte*, 131 (nos. 6, 26), commentary, 134, 410.

⁹⁴ *Canani De Constantinopoli narratio*, 464. Although this was a siege army of the Turkish sultan Murad outside the gates of the Byzantine capital, this does not rule out that at least some of the money changers accompanying it were Greeks.

⁹⁵ *Démétrius Cydonès, Correspondance*, ed. Loenertz, 1:30 (no. 5); *Demetrios Kydones, Briefe*, trans. F. Tinnefeld (Stuttgart, 1981), 1.1: (no. 15).

⁹⁶ On the development of interest in the late Byzantine period, cf. N. P. Matses, “Ο τόκος ἐν τῇ νομολογίᾳ τοῦ πατριαρχείου Κωνσταντινουπόλεως κατὰ τοὺς ἰδ’ καὶ ἐ’ αἰῶνας,” *ΕΕΒΣ* 38 (1971): 71–83. However, according to E. S. Papagianni, “Ἡ νομολογία τῶν ἐκκλησιαστικῶν δικαστηρίων τῆς βυζαντινῆς καὶ μεταβυζαντινῆς περιόδου σέ θέματα περιουσιακοῦ δικαίου (Athens, 1992), 1:48, the patriarchal register contains only two texts from the years 1399 and 1400 with concrete indications of the interest demanded; in the first case it was 26.6%, in the second case, 15%.

⁹⁷ On corresponding problems during the first great siege of Constantinople at the end of the 14th century, see D. Bernicolas-Hatzopoulos, “The First Siege of Constantinople by the Ottomans (1394–1402) and Its Repercussions on the Civilian Population of the City,” *ByzSt* 10.1 (1983): 39–51. On the general picture, see K.-P. Matschke, “Geldgeschäfte, Handel und Gewerbe in spätbyzantinischen Rechenbüchern und in der spätbyzantinischen Wirklichkeit,” *Jahrbuch für Geschichte des Feudalismus* 3 (1980): 183ff.

⁹⁸ Cf. the business activities of Goudeles Tyrannos at the end of the 13th century in and around Smyrna, in *MM* 4:286.

⁹⁹ *MM* 1:400f.

¹⁰⁰ Ibid., 511.

in one case even to purchase raw materials and resources to carry on a workshop whose survival was threatened.¹⁰¹ This means that late Byzantine society strove to put its remaining wealth also to productive use, to find new ways to live and survive, even if these efforts ultimately proved to be insufficient.¹⁰²

Crafts and Their Role in the Late Byzantine Cities

A number of factors explain why the status of crafts in the late Byzantine cities was very unfavorable, with the living conditions of urban artisans highly uncertain and possibilities of development exceedingly limited: the attractive supply of western mass goods at most urban markets, competition from immigrant and naturalized artisans in the Latin quarters and colonies, and the fact that the countryside was at least partially supplied with the products of village craft industry and part-time peasant artisans. Still, at least the larger cities had all the necessary craftsmen to satisfy the basic needs for food and clothing: there were bakers, butchers, cooks, tailors, and cobblers. Their numbers were sometimes large but always manageable since they could essentially work only for the local market, their own city, and sometimes also for a circumscribed slice of the surrounding land. Moreover, baking, slaughtering, sowing, even spinning and weaving went on in many private households. There is also evidence in late Byzantine Constantinople and in some provincial cities of craftsmen such as smiths, joiners, coopers, ropemakers, and cartwrights, and scattered references to specialized trades such as horseshoe blacksmiths, boilermakers, weapons blacksmiths, and goldsmiths. However, we have no indications that such trades were clustered in specific cities.

We can detect a few larger groups of artisans or manual workers, especially but not only in Constantinople. To begin with there is the group of construction workers. Constantinople was the site of a lot of building activity in the first decades after its return to Byzantine control. The city walls, harbors, and gates were extensively repaired and rebuilt. Palaces, churches, and monasteries were built anew or restored and renovated. The new dynasty and the aristocratic clan associated with it spared no expense to restore the capital's representative Byzantine appearance.¹⁰³ Later the flow of funds for public construction was much less generous. Still, lucrative construction projects were awarded even after 1350. Work on the fortifications continued off and on up to the end of the empire; individual segments, such as the Golden Gate, were reinforced and expanded. The city's harbors, especially the harbor of Kontoskalion on the Sea of Marmara, were dredged at regular intervals and, if necessary, newly fortified.

On these and other occasions we hear of the capital's οἰκοδόμοι, τέκτονες, and λεπτοῦργοι, the masons and carpenters. Construction workers manned Constantinople's

¹⁰¹ Ibid., 372ff.

¹⁰² On the international money business of aristocratic entrepreneurs in the late period and the depositing of large assets in Italian banks, see K.-P. Matschke, "Commerce, Trade, Markets, and Money, Thirteenth–Fifteenth Centuries," *EHB* 803–5.

¹⁰³ Cf. A.-M. Talbot, "The Restoration of Constantinople under Michael VIII," *DOP* 47 (1993): 243–61.



1. St. Phloros, a stonemason, and St. Hermolaos, a metalworker. Church of St. Peter in Kouvaras, Attica, fresco, 13th century (after N. Panselinou, “Ἅγιος Πέτρος Καλυβίων Κουβαρᾶ Ἀττικῆς,” Δελτίον τῆς Χριστιανικῆς Ἀρχαιολογικῆς Ἑταιρείας, ser. 4, vol. 14 [1987–88])

walls as guards in 1328, in 1348 they and other artisans took up arms to fight against the Genoese of Pera,¹⁰⁴ and they appear repeatedly in patriarchal and notarial documents.¹⁰⁵ At the large state and private building projects they were usually supervised and directed by ἐπιστάται (“foremen”), who also paid them on orders from the person commissioning the project.¹⁰⁶ In general they were under the authority of the imperial παλατοφύλαξ,¹⁰⁷ who could use them for repair and construction projects at the city’s palaces.

A second larger group were the seamen, that is, all those who lived off the sea: the many boatmen who, with their boats and barges, served the daily traffic between Constantinople and Pera, and who maintained maritime links with the suburbs on the Thracian side of the Sea of Marmara and with the Turkish landing sites on the other shore also during times of political trouble, civil wars, and military confrontations with the Latins and Turks; the no less numerous fishermen who set up their fishing installations (ἐποχαί) at the shores of the city or close to it, or sailed the Sea of Marmara, the Bosphoros, and the entrance to the Black Sea in search of a good catch and full nets; finally, the workers who operated saltworks and supplied the government depots with their products, and who were probably not very numerous in the area around Constantinople. With some qualifications we could add to this group also the porters who kept the activities at the harbor running, loading and unloading ships and transporting wares from and to the storehouses. Native and foreign shipowners and captains preferred to find sailors for their trips across the sea in these circles, and imperial admirals recruited rowers for their war galleys and guard ships among these men.

These *stenites*,¹⁰⁸ seamen from the straits, continued to be a very restless group in the late Byzantine period, as well. There were constant conflicts with the Genoese colony of Pera over fishing grounds and the size of catches, and with Venetian shipowners over the transport of people and goods. Toward the end of the empire they showed clear sympathies for the Turks and were therefore watched and punished by the Byzantine authorities: Latin accounts tell us that in 1433, for example, Emperor John VIII had six hundred fishing huts at the shores below the city wall destroyed to prevent a coup against the capital and the imperial government by their occupants in league with the Turks, or to exact revenge for such a planned action.¹⁰⁹ The *megas doux*¹¹⁰ and possibly other naval officers had the formal right to draft them for service as rowers. The right to tax their catches was exercised by a τῆς ἀλιευτικῆς προστατῶν, who also oc-

¹⁰⁴ Kantakouzenos, 1:292 (I.56); *Nicephori Gregorae Byzantina historia*, ed. by L. Schopen, vols. 1–2; ed. I. Bekker, vol. 3 (Bonn, 1829–55), 1:419 (IX.6), 1:851 (XVII.3).

¹⁰⁵ MM 2:486f; G. Ferrari dalle Spade, “Registro Vaticano di atti bizantini di diritto privato,” *Studi bizantini* 4 (1935): 262, 265.

¹⁰⁶ H. Delehayé, “Constantini Acropolitae, hagiographi byzantini, Epistularum manipulus,” *AB* 51 (1933): 280.

¹⁰⁷ K. N. Sathas, *Μεσαιωνικὴ βιβλιοθήκη*, 7 vols. (Venice, 1872–94), 6:649.

¹⁰⁸ Term in J. Darrouzès, “Lettres de 1453,” *REB* 22 (1964): 89.

¹⁰⁹ Jorga, *Notes*, 1:559f; cf. K.-P. Matschke, “Situation, Organisation und Aktion der Fischer in Konstantinopel und Umgebung in der byzantinischen Spätzeit,” *Byzantinobulgarica* 6 (1980): 292.

¹¹⁰ Talbot, *Correspondence*, 24; cf. Makris, *Studien*, 109.

cupied a high rank in the late Byzantine hierarchy of offices.¹¹¹ They had to pay landing fees (σκαλιατικόν)¹¹² and perhaps also crossing fees (διαβατικόν) to the *kommerkiarioi* and other imperial functionaries for their barges and ferries, which they rented out and perhaps used for regular traffic.

Finally, this large group in the late Byzantine capital also included rural folk, that is, city dwellers who engaged in agricultural work: dependent peasants and small landowners, gardeners (κηπουροί) and vintners (ὄμπελικοί, ὄμπελουργοί) or garden and vineyard workers, and residents of Constantinople who owned a garden or vineyard and worked it themselves or used day laborers who lived in the city and were hired for maintenance and harvest work on either side of the city walls. It is these people, in particular, who are described as σκαπανεῖς in Greek sources (that is, people who work with the hoe),¹¹³ and who appear in the Latin sources as *fossores* (*vinearum*). The import of foreign wine by Italian merchants, of *vinum de Cotrono* (from Korone in the Peloponnese), de Turpia (from Turkey), and from other wine-growing regions (especially Malvasia from Crete) seriously affected production and market conditions for vintners, vineyard owners, and vineyard workers around Constantinople. So much so that Emperor John V sent a delegation to the Venetians in 1362 to tell them that the price for local wines no longer justified the expenses for vineyard workers; the emperor also instructed the delegates to ask for supportive measures from the Venetians to prevent the total disappearance of local wine.¹¹⁴

The negative impact of the commercial activities of the Latins was equaled or even surpassed by the impact of the military activities of the Turks in the region of the capital. The authorities responsible for the remaining part of the empire and its capital tried to protect themselves against the destruction of horticultural areas and the enslavement of vineyard workers by resettling people from the suburbs and the hinterland to Constantinople, and perhaps also by switching over to crops that were hardier and matured more quickly. When the Turks, after a brief interlude, penetrated once again into the capital's territory in the second decade of the fifteenth century, they found the villages and suburbs deserted—Emperor Manuel II had resettled their inhabitants to Constantinople.¹¹⁵ The long-term consequence was surely a general strengthening of wage labor in agriculture, especially the use of seasonal workers for sowing and harvesting, and the organization of reaper columns (θεριστάδες)¹¹⁶ who had to work in short spurts and could quickly take refuge behind city walls or on inaccessible mountaintops.

While it is more difficult to make out the numerical share of building workers in the

¹¹¹ *Démétrius Cydonès, Correspondance*, ed. Loenertz, 2:165f (no. 261). See a new interpretation by F. Tinnefeld, *Demetrios Kydones, Briefe* (Stuttgart, 1999), 3:71ff (no. 251).

¹¹² Thomas and Predelli, *Diplomatarium*, 1:167 (no. 80).

¹¹³ Examples: *Planudis Epistulae*, ed. Leone, 156 (no. 99); Gregoras 1:256 (VII.8); 2:850 (XVII.3); Kantakouzenos, 2:176 (III.28).

¹¹⁴ Thomas and Predelli, *Diplomatarium*, 2:84 (no. 49).

¹¹⁵ Ducas, 127 (XIX.9).

¹¹⁶ On the term and its meaning, see Schreiner, *Texte*, 257f (no. 54), and cf. 415.

overall population in Thessalonike, our sources for this city allow a more detailed insight into the internal structure of the trade. In 1421, three building experts or master builders (ἄνδρες οἰκοδόμοι) employed trained artisans (τεχνίται) as well as untrained laborers (ἐργάται) to improve a garden plot by renewing the well and the water pipes.¹¹⁷ Between 1322 and 1327 we even know of a πρωτομαίστωρ τῶν οἰκοδόμων or τῶν δομητόρων named George Marmaras;¹¹⁸ some scholars see him as the head of a guild, others as the leader of a team of masons. We can also make out an organization of seamen, led by the ἄρχων of the city quarter in which most of them lived,¹¹⁹ and an organization of the saltwork workers in the form of an association (συντροφία) headed by a πρωταλικάριος.¹²⁰ These are indications that the population groups who made a living from the sea also played a role of some significance in the city and its immediate environs. The same document that mentions the three master builders and their workers also reports on a larger number of respected gardeners who had leased garden plots outside the city's western gate from one of the city's family of entrepreneurs. Vineyard laborers (ἀμπελῶνος ἐργάται[ς]) who worked with (two-pronged) hoes (δικέλλαι) and vats under the supervision of the owner of the vineyard are mentioned in a saint's life.¹²¹

Construction workers are also found in other Byzantine cities at this time: in Mesembria, for example, where various masons (*lathorii[s]*) built a kind of chimney (*charforium*) in the room of Count Amadeus of Savoy in 1366, and where a number of carpenters (*carpentarii[s]*) were active at the same time.¹²² The building trade was particularly strongly represented also in Mistra.¹²³

Some builders, seamen, and farmers needed very specialized knowledge and skills for their work. That was certainly true for the construction of windmills, which may have had a center in the Genoese colony of Pera/Galata, although some of the work there was presumably done by Byzantine Greeks or naturalized Venetian and Genoese subjects. Examples of the latter are the μυλοτέκτων Theodoros Sabalia/Savalia, who in 1436 acted as a witness to a contract for the sale of such a mill,¹²⁴ and the "magister molendinorum Manoli Milocaracti," who was hired in 1390 to repair a mill belonging to the commune of Pera. It was surely also true of shipbuilding, which declined in the late Byzantine period but was still being carried out by Greek-Byzantine experts such as the *magistro axie* Costantino/Konstantinos Arceni/Arsegni, who lived in the *burgo* of Agerri/Lagirio, since 1376 part of Pera. In 1390 he and his team were commissioned

¹¹⁷ F. Dölger, *Aus den Schatzkammern des Heiligen Berges* (Munich, 1948), 102ff (no. 102).

¹¹⁸ Source references listed in *PLP* 7:17102.

¹¹⁹ Kantakouzenos, 2:575 (III.94).

¹²⁰ Oikonomides, *Actes de Dionysiou*, 95f (no. 14).

¹²¹ D. G. Tsames, *Φιλοθέου Κωνσταντινουπόλεως τοῦ Κοκκίνου ἀγιολογικὰ ἔργα Α'*, Θεσσαλονικεῖς ἄγιοι (Thessalonike, 1985), 105.

¹²² F. Bollati di Saint-Pierre, *Illustrazioni della spedizione in Oriente di Amadeo VI (Il Conte Verde)* (Turin, 1990), 92 (no. 352), 101 (no. 393).

¹²³ I. P. Medvedev, *Mistra* (Leningrad, 1973), 84f.

¹²⁴ H. Hunger, "Zwei byzantinische Urkunden der späten Palaiologenzeit aus der österreichischen Nationalbibliothek," *BZ* 48 (1955): 301 (no. 1); cf. E. Trapp, "Probleme der Prosopographie der Palaiologenzeit," *JÖB* 27 (1978): 194.

by the authorities in Pera to build a new galley.¹²⁵ A year earlier he had entered into a contract with the patron of the *cocha* Santa Maria, Antonio Grimaldi, in which he was described as *protomastrium dicte coche*,¹²⁶ a designation that could make him the builder as well as a crew member of this ship. Until its fall, however, Constantinople also had *constructores navium* who were working at the request of the Byzantine authorities.¹²⁷ Specialized knowledge was also needed to build stationary fishing installations (*epochai*, *dalyan*) and to plant and care for vineyards.

Teaching professions existed specifically in the building trade, with master builders working together with their apprentices (μαθητάδες)¹²⁸ and employees. Master masons and master carpenters appeared frequently as witnesses when houses changed owners, presumably because their expert opinion was solicited to determine the condition of the building and its value.¹²⁹ Most activities, however, did not call for any specialized knowledge or skills. The building trade was in large measure an auxiliary trade. Many city dwellers could catch fish and transport passengers and goods on barges, boats, and ferries in the waters close to the city, provided they had the necessary equipment. The same was true for most agricultural activities. The decline of monumental architecture as compared to functional military and private buildings, the shortage of state funds and material resources to construct and maintain larger fleets, and possibly also the abandonment of more complicated methods of fishing and the decline of vine growing in agriculture may have led to a further decline of qualified work in these areas. Many activities undoubtedly were or became part-time jobs: a poor priest worked as a mason,¹³⁰ some urban shop owners made wine and must, and many simple residents of coastal towns caught fish for their own consumption. In the late Byzantine period, too, the entire population of a city or the residents of a quarter or the harbor district could, if necessary, be drafted for larger construction projects, such as erecting and repairing city walls, cleaning the harbor basin, or fortifying the harbor installations. Occasionally even clerics and monks participated, or were asked to participate, in such community actions.¹³¹

Highly qualified artisans could count on only a small circle of customers for their sophisticated and expensive products, and to preserve that circle they sometimes chose

¹²⁵ Balard, *La Romanie génoise*, 1:271.

¹²⁶ G. G. Musso, *Navigazione e commercio genovese nei documenti dell'Archivio di Stato di Genova* (Rome, 1975), 49.

¹²⁷ N. Jorga, "Notes et extraits pour servir à l'histoire des croisades au XVe siècle (fin)," *ROL* 8 (1900–1901): 276. The manufacture of oars in *arcenagli domini Imperatoris* is attested by the expedition accounts of the Green Count: Bollati di Saint-Pierre, *Illustrazioni*, 72 (no. 262).

¹²⁸ H. Hunger and K. Vogel, *Ein byzantinisches Rechenbuch des 15. Jahrhunderts* (Vienna, 1963), 58f (no. 76).

¹²⁹ Cf. Ferrari dalle Spade, "Registro Vaticano," 263, 265. The *palatophylax* who supervised the urban construction workers was also used occasionally as a *taxator*. Against this background, it may be that the *protomagistros* Theotokes (MM 2:440f [no. 608]), who was charged with assessing the value of plots and buildings, may have been a master of the construction workers like Georgios Marmaras in Thessalonike.

¹³⁰ MM 2:488ff (no. 643).

¹³¹ "Εγκώμιον εἰς τὸν αὐτοκράτορα Ἰωάννην τὸν Παλαιολόγον," ed. Sp. Lambros, in *Παλαιολογεία καὶ Πελοποννησιακά*, (Athens, 1912), 3:298.

to become even more highly specialized. Examples of such artisanal specialties are gold and silver casements for icons and gold embroidery for liturgical vestments,¹³² which were made by goldsmiths and textile workers in Constantinople, Thessalonike, and Serres.¹³³ What is hard to find during this period, in contrast to the middle Byzantine period, is a specialized trade that had some local concentration and worked for a supra-local—at least regional—market or even for export. There are certain references to silk weaving in Mistra¹³⁴ and cloth making in Serres,¹³⁵ to very specific textile products from Thessalonike¹³⁶ and especially from Philadelphia. Moreover, in Thessalonike there are indications in the fourteenth century of a stronger orientation toward light and possibly cheaper utility textiles, and various textile workers belonged to the city's upper middle class. Still, even these two important cities did not develop into real textile cities during Byzantine times. The same was undoubtedly the case for leather-working in Constantinople. Although it must have had greater economic weight than other trades in the capital, and was also a popular profession to learn, so far there are hardly any indications for the export of its wares.¹³⁷

Given this situation, one might ask about possible artisanal concentration in the countryside in villages and suburban settlements. However, textile production in the small town of Mayton/Madytos in the Dardanelles, which was still populated almost exclusively by Greeks as late as 1550, and where men and women from about 350 families made their living entirely by spinning and weaving,¹³⁸ was in all likelihood a post-Byzantine development. Urban production processes in the late Byzantine period maintained a very simple artisanal pattern; there was little diversity in the types of businesses that existed and their size was rather limited, with little need for complicated business organization. The only ἐργαστήριον explicitly described as large in the late Byzantine sources was a store and not a workshop.¹³⁹ Only once do we hear of a craftsman who worked with his colleagues (ὁμοτέχνους),¹⁴⁰ but we cannot determine how many there were or what their relationship to the craftsman was. Many artisans presumably worked alone; more than two assistants was probably the exception.

In fact, what we tend to see compared to earlier periods was not an expansion of

¹³² Cf. E. Kislinger, "Gewerbe im späten Byzanz," in *Handwerk und Sachkultur im Spätmittelalter* (Vienna, 1988), 122f.

¹³³ *Planudis Epistolae*, ed. Leone, 164ff (no. 103); cf. H.-V. Beyer, "Die Chronologie der Briefe des Maximos Planudes an Alexios Dukas Philanthropenos und dessen Umgebung," *REB* 51 (1993): 130; M. Treu, *Theodori Pediasimi eiusque amicorum quae exstant* (Potsdam, 1899), 22. Tsames Φιλοθέου, 556.

¹³⁴ Medvedev, *Mistra*, 85f.

¹³⁵ Laiou, "Κοινωνικές δυνάμεις," 15f. On this, cf. also Krekić, *Dubrovnik*, 196 (no. 195).

¹³⁶ Matschke, "Tuchproduktion und Tuchproduzenten in Thessalonike und in anderen Städten und Regionen des späten Byzanz," *Βυζαντικά* 9 (1989): 69ff. A. Karpozilos, "Realia in Byzantine Epistolography," *BZ* 88.1 (1995): 79.

¹³⁷ It is, to say the least, interesting that a part of the *coria* (hides) that the Byzantine authorities confiscated from the Venetian Jews in 1320 "fuerunt exportata." Thomas and Predelli, *Diplomatarium*, 1:153.

¹³⁸ *Reise des französischen Gesandtschafts-Secretärs und Geographen Nikolaus von Nikola von Marseille nach Konstantinopel 1551*, trans. J. H. Jäck (Graz, 1831), 35.

¹³⁹ *MM* 2:440.

¹⁴⁰ Tsames, Φιλοθέου ἔργα, 556.

enterprises but a process that made them more individualized and minimal in size. Imperial central workshops and the kind of state-organized production that still existed under the Laskarid dynasty and the first Palaiologoi became rarer thereafter and eventually seem to have disappeared altogether. It is very likely that the imperial workshops for the manufacture of precious textiles were not brought back to Constantinople after 1261, for as late as 1290 the court was still procuring its clothes from Nicaea.¹⁴¹ Although various weavers were working to supply the imperial demand around the middle of the fourteenth century, they were evidently no longer doing so in imperial workshops.¹⁴² Special jewelers, too, no longer seem to have existed at the imperial court at this time, for the emperors had to place their orders—smaller now—with private workshops.¹⁴³ The production of weapons for imperial orders and paid for by state funds is still attested in the larger cities of the empire of Nicaea,¹⁴⁴ and Michael VIII also procured the necessary defensive equipment for the recaptured capital, specifically arrows and catapults, by providing weapons makers and builders with sufficient material and money.¹⁴⁵ His successors, however, had to make do with inspecting and collecting existing weapons when they equipped larger auxiliary units or sought to prepare the capital for a lengthy defense.¹⁴⁶ There are indications that refineries in which precious metals were purified and prepared for possible minting existed in late Byzantine Constantinople and Thessalonike,¹⁴⁷ and possibly also in the inland city of Serres, not far from the Serbian mining regions.¹⁴⁸ Although it appears that the state assigned the work to the persons running the refineries or employed them, these were probably no longer state-owned enterprises; instead, they were leased to private societies or transferred to groups of benefice holders. It is even possible that the minting of coins passed into the hands of private lessees after the middle of the fourteenth century.¹⁴⁹

This move toward privatization was likely connected with a shrinkage of production capacity, since the purity of processed or minted metals became less important and the

¹⁴¹ Cf. A. Cutler and P. Magdalino, "Some Precisions on the Lincoln College Typikon," *CahArch* 27 (1978): 191 n. 84.

¹⁴² Cf. K.-P. Matschke, "Tuchproduktion," 81f.

¹⁴³ For example Kantakouzenos, 2:564 (III.92).

¹⁴⁴ *Theodori Scutariotae Additamenta ad Georgii Acropolitae historiam*, ed. A. Heisenberg (Leipzig, 1901), 1:285. Cf. the German translation by W. Blum, *Georgios Akropolites, Die Chronik* (Stuttgart, 1989), 199.

¹⁴⁵ Pachymeres, 1:364 (V.10).

¹⁴⁶ Gregoras, 1:205 (VI.10); 2:850 (XVII.3).

¹⁴⁷ See K.-P. Matschke, "Mining," *EHb* 120.

¹⁴⁸ Cf. I. Beldiceanu-Steinherr, *Recherches sur les actes des règnes des sultans Osman, Orkhan et Murad I* (Munich, 1967), 245 (no. 50). The author believes that the gold artisans mentioned in the year 1388 were not pure goldsmiths but people who worked in the refining of precious metals (p. 246). Since the city had fallen into Turkish hands only five years earlier, it is likely that these artisans were already working, and their houses were already standing in Byzantine times. In the middle of the 15th century, Serres was a center of trade in precious metals; cf. K.-P. Matschke, "Zum Anteil der Byzantiner an der Bergbauentwicklung und den Bergbauerträgen Südosteuropas im 14. und 15. Jahrhundert," *BZ* 84/85 (1991–92): 64 and n. 106.

¹⁴⁹ See Matschke, "Münzstätten," 197ff.

issues became smaller. The number of private citizens who brought precious metals to the refineries for purification or minting declined, which meant that the opportunities of private profit for the operators had to decline as well.

References to other production installations that might have served a larger circle of users, and could therefore have grown beyond the framework of small workshops, are virtually nonexistent. A *κυλισταρεῖον*¹⁵⁰ is attested around 1340 at the Gate of John the Baptist. Assuming this was not merely a depot for cloths but a cloth mangle similar to the “volta per farli sopresar (pani)” mentioned by Badoer a century later,¹⁵¹ the main work presumably involved the smoothing and pressing of imported cloths, not the final processing of the products of local textile workers, as was customary in the central workshops of Italian cloth manufacturers at this time. Installations such as oil presses, grain-drying kilns, and grain mills also appear to have been on a modest scale, were operated by individuals, and worked for a small circle of users. One fact that argues against the existence of manufacturing enterprises in shipbuilding is that the small number of late Byzantine arsenals did not operate continuously and with the same level of quality; rather, craftsmen skilled in shipbuilding were only occasionally enlisted for modest fleet building programs. If funds flowed into urban production processes, it was probably only to maintain them at a given level, not to expand them to any significant extent. We know of a *συντροφία*, an association, between an investor and a smithy in the capital;¹⁵² its upshot was that the artisan lost his workshop, not that he was enabled to expand its size and the number of workers. We also know of joint businesses of various *maestri de chalze* and tailors. However, these only involved the joint purchasing of raw materials and the sale of finished products, and possibly no more than parallel commercial activities;¹⁵³ there is nothing to indicate joint production activity.

Traces of the traditional guild or corporation system are undoubtedly still found in late Byzantine cities. In addition to the above-mentioned officers with supervisory functions among builders and seamen, that system included also an *ἑξαρχος τῶν μυρεψῶν* (“chief of the perfumers”) in Thessalonike¹⁵⁴ and two *πρωτομακελλάριοι* (“chiefs of the butchers”) in the same city and in Constantinople.¹⁵⁵ However, it is hardly possible to speak of a still intact and functioning guild system. It is even possible that in the late period the functionaries of the old system became associated with specific tasks¹⁵⁶ in circumscribed areas, with smaller crews and associations, which we can discern more or less clearly among builders and seamen. But while the guild system in

¹⁵⁰ *Lavra*, 3:24 (no. 123); cf. Matschke, “Tuchproduktion,” 63f.

¹⁵¹ Badoer, 142, 176.

¹⁵² MM 2:326ff.

¹⁵³ Badoer, 27, 154, 458, 726.

¹⁵⁴ Dölger, *Aus den Schatzkammern*, 303 (no. 111).

¹⁵⁵ Kugeas, “Notizbuch,” 145f; Badoer, 414.

¹⁵⁶ Around 1450, Korone and Modon had the *oficio* of a “protomaestro de bollar el corame,” to which urban master craftsmen were selected and appointed by the city authorities. “Statuta Coroni et Modoni,” ed. K. Sathas, in *Documents inédits relatifs à l'histoire de la Grèce au moyen-âge*, 9 vols. (Paris-Venice, 1880–90), 4:184. Is it possible that late Byzantine chief masters were chosen in a similar manner for such tasks?

the late medieval cities in the West was undermined, reshaped, and displaced by early capitalist forms of production, and thereby replaced by something positive, there is little sign of a comparable development in late Byzantine cities. While old elements slowly petered out, new ones did not quite get off the ground, at least in the area of production. This situation had a profound influence on the history of the late Byzantine city, for it tied the city more strongly to Byzantine traditions than to western innovations.

Principal Elements of the Late Byzantine Urban Economy

Artisanal and commercial production was thus the sore point of the late Byzantine urban economy, in spite of the fact that the initial situation in the empire of Nicaea was not all that bad, and that the first Palaiologan emperor, Michael VIII, seems to have made a considerable effort to strengthen the recaptured capital in material terms by resettling artisans from Asia Minor, thereby giving Constantinople greater importance. However, the eviction of the Latin rulers from Constantinople did not mean that the Latin economic power in the Byzantine Empire was suppressed. In fact, it initiated a qualitatively new phase of western economic presence. As a result, the situation of the Byzantine urban economy deteriorated noticeably in the subsequent period; in particular, the sphere in which late Byzantine trades could operate was strongly curtailed. The various political activities in the early Palaiologan period, during the civil wars, and in the course of the conflicts between the Venetians and the Genoese were also driven by the efforts of individual cities and various urban groups to gain more breathing and living space in their own world. Yet most of these efforts were unsuccessful: some saw no alternative but to join the other, the Latin, world with its possibilities and opportunities. Not only did qualified craftsmen from the Byzantine cities move to the quarters and colonial territories of Venice and Genoa, but, already at the end of the thirteenth century, Byzantine *magistri ingenierii* were involved in building bridges in central Italy,¹⁵⁷ and in the fourteenth century *peliparii* ("furriers") from Constantinople were working in Dubrovnik and Genoa.¹⁵⁸ In the fifteenth century, shipbuilding experts and seasoned captains from the Byzantine capital and the Latin territories of the Romania held key positions in the Venetian arsenal and at the French royal court.¹⁵⁹ In 1470 King Louis settled Greek weavers in the city of Tours.¹⁶⁰ As early as 1445, two makers of gold thread from Constantinople received permission to practice their trade in London. There was thus no lack of artisanal skill and technical knowledge in the late Byzantine period, but conditions for putting it to use were quite unfavorable in the late Byzantine cities, and they continued to deteriorate.¹⁶¹

¹⁵⁷ E. Müntz, "Les artistes byzantins dans l'Europe latine du Ve au XVe siècle," *RArtChr* 5th ser., 4 (1893): 187.

¹⁵⁸ Krekić, *Dubrovnik*, 217 (no. 328); C. Otten-Froux, "Deux consuls des grecs à Gênes à la fin du 14e siècle," *REB* 50 (1992): 248.

¹⁵⁹ J. Harris, "Bessarion on Shipbuilding: A Re-interpretation," *BSI* 55.2 (1994): 296ff.

¹⁶⁰ Müntz, "Artistes byzantins," 190.

¹⁶¹ Harris, "Bessarion," 302f.

Turkish expansion, too, brought at best a short-term, partial, and temporary improvement for the commercial urban economy. Turkish interest in Byzantine goods was only a concomitant to Turkish interest in the Byzantine cities themselves. Although urban producers lost their rural competitors when the cities were cut off from their hinterland, that did not do much to strengthen the position of the urban economy. Faced with the choice between two evils, some urban economic elements and groups opted for the Turks: the fishermen and boatmen of Constantinople are only one example. The battle over the political and economic legacy of Byzantium was not decided, however, by the late Byzantine cities and their inhabitants who engaged in agriculture and trade. Although they played a part in the struggle for the fate of the Romania, in the end they were not so much participants as spectators.

Aspects of the Byzantine City, Eighth–Fifteenth Centuries

Charalambos Bouras

As a theoretical subject, the Byzantine city from the end of the iconoclastic controversy to the final overthrow of the empire in 1453 is highly extensive and complex. This is not only because the cities themselves were numerous, but also because during that period of almost eight centuries there was a dynamic of change whose results differed in each separate case. There has been increased scholarly interest in the subject in recent years, which can be attributed to a turn toward a study of the built environment on the large scale in connection with its architecture, to a search for some measure of continuity in urban life after ancient times, and to a growing trend toward the study of productive relations, given that the secondary sector of the economy was always among the definitive functions of cities, no less in Byzantium than elsewhere.¹

However, these are only three of the numerous and frequently overlapping aspects of the subject. The history of the cities themselves, the evolution of their institutions² and their social structures, and the development of their architecture and town planning³ are also topics of interest. Where Byzantine cities are concerned, matters are far

This chapter was translated by John Solman.

¹ A partial bibliography of works on Byzantine cities and towns would include the following: A. P. Kazhdan, “‘Vizantiiskie goroda,’ v. VII–IX vv.,” *SovArh* 21 (1954): 164–88; idem, *Derevnia i gorod v Vizantii IX–XI vv.* (Moscow, 1960), chaps. 4–5; idem, “La ville et le village à Byzance au XIe–XIIe siècles,” *XIIe Congrès International des études byzantines: Rapport collectif, Ochrid, 1961* (Belgrade, 1964), 31–54 (repr. in *Féodalisme à Byzance* [Paris, 1974], 75–89); V. Hrochová, “Les villes byzantines au 11e–13e siècles: Phénomène centrifuge ou centripète?” *XV Congrès International des études byzantines: Rapport* (Athens, 1976), 3–14; A. P. Kazhdan and A. Wharton Epstein, *Change in Byzantine Culture in the Eleventh and Twelfth Centuries* (Berkeley, 1985), 31–48; P. Tivčev, “Sur les cités byzantines au XI–XIII siècles,” *BBulg* 1 (1962): 145–82; C. Mango, *Byzantium: The Empire of New Rome* (London, 1980), 60–87; C. Foss and A. Cutler, “Cities,” *ODB* 464–66; C. Foss, “Archaeology and the Twenty Cities of Byzantine Asia,” *AJA* 81 (1977): 469–86; W. Brandes, *Die Städte Kleinasien im 7. und 8. Jahrhundert* (Amsterdam, 1989); A. Bryer, “The Structure of the Late Byzantine Town: Dioikismos and Mesoi,” in *Continuity and Change in Late Byzantine and Early Ottoman Society*, ed. A. Bryer and H. Lowry (Birmingham–Washington, D.C., 1986), 263–80.

² See, in particular, E. Kirsten, “Die Byzantinische Stadt,” in *Berichte zum XI. Internationalen Byzantinistenkongress* (Munich, 1958), 1–48.

³ J. Irmscher, “Byzantinischer Städtebau,” in *Stadtbaukunst im Mittelalter*, ed. D. Dolgner (Berlin, 1990), 48–52; Ch. Bouras, “City and Village: Urban Design and Architecture,” *JÖB* 31.1 (1981):

from simple: on the one hand, we are far distant from them in time, and on the other, our information about them is the fruit of research carried out unsystematically and on the basis of personal preference and chance.

Where the economic history of Byzantium is concerned, the phenomenon of the cities of the empire is of great significance,⁴ not simply because it was there, as I have noted, that secondary and tertiary production developed, but also because the cities are bound up with questions of demography, spatial planning, and the distribution and consumption of products. This chapter discusses the Byzantine city in terms primarily of its economic activity, form, and function, with the assistance of information drawn directly from the material objects made available to scholars by archaeology in the broad sense of the term. This is not to say that reference is not made, as appropriate, to information from the written sources: historical texts, chronicles, archaeological texts, letters, treatises on strategy, and so on. However, the emphasis is on what has remained of the built environment of each city and on the movable finds from excavations that are of direct or indirect significance for the economy.

The existing data are disheartening for the researcher. Unfortunately, archaeological evidence is very scanty, and only in a tiny number of instances is it capable of providing us with a satisfactory picture of a city, or even part of a city, as it was in Byzantine times. With the exception of fortifications and churches (and unlike the situation in the medieval cities of western Europe), buildings tend to have survived only to a height of a few courses of masonry, or in the form only of their foundations, and to have required excavation to make them accessible.

Although archaeology⁵ is of obvious significance⁶ for our knowledge of the material culture of Byzantium and of the Byzantine world in general, and although the primary information it supplies is of inestimable value, the results to date for our knowledge of the Byzantine city are sparse, for the following reasons. The Byzantine strata of many cities have been completely or partly destroyed, without being studied, by subsequent habitation of the site. Such instances include Constantinople itself, Thessalonike, and to some extent Thebes. For a variety of reasons,⁷ no excavations have been conducted in large parts of the Byzantine cities, and the picture we have is a fragmentary one.

611–53. References to this paper in the footnotes are made only in instances of subjects of special economic interest. The analytical documentation of archaeological finds in cities made up to 1981 is also taken as familiar and is not included here.

⁴ Typically, in the general work by A. Guillou, *La civilisation byzantine* (Paris, 1974), 243ff, matters concerning cities are dealt with in the chapter on the economy of Byzantium.

⁵ See also T. Gregory and A. Kazhdan, "Archaeology," *ODB*, 152–53; A. Guillou, "Technologie," in *Akten XVI. Internationalen Byzantinistenkongress*, ed. W. Hörandner (Vienna, 1981), 1.1:19–41.

⁶ For the immediately preceding period, see J.-P. Sodini, "La contribution de l'archéologie à la connaissance du monde byzantin (IV–VII siècles)," *DOP* 47 (1993): 139–84, and J. Russell, "Transformations of Early Byzantine Urban Life: The Contribution and Limitations of Archaeological Evidence," in *The 17th International Byzantine Congress. Major Papers* (Washington, D.C., 1986), 137–54. See also P. Lemerle, *Les plus anciens recueils des Miracles de Saint-Démétrius et la pénétration des Slaves dans les Balkans*, 2 vols. (Paris, 1979–81), 2:65, "Le témoignage de l'archéologie."

⁷ The most important is the prevention of such excavations by the 18th- and 19th-century buildings now occupying the sites. Kastoria and the Plaka district of Athens are typical examples.

Typical cases include Corinth,⁸ about which we have much knowledge but even more questions, Argos, Arta, and the central section of Pergamon. Much of the excavation has been carried out in a fragmentary, random manner. In Greece, such digs are called “rescue excavations,”⁹ and the picture they produce is fragmented and manifestly incomplete. Excavations of this type are the rule in cities such as Thebes, Lakedaimon, Chalkis, and Didymoteichon.

In addition, the nature of the finds themselves is often an obstacle to a study of the situation. Byzantine houses tended to be built in a utilitarian manner, with poor workmanship and materials being used for the second or third time, and incorporating elements from earlier structures, as a result of which it is frequently impossible to distinguish the building phases of the finds and date them.¹⁰ This prevents archaeologists from reconstructing the fabric of the city in each period. Among characteristic instances of this situation are the groups of buildings (as yet unpublished) beneath Dioiketeriou Square in Thessalonike, on a site owned by the Hellenic Telecommunications Organization in Argos, and by the church of St. Nicholas in Thebes.

Rescue excavations conducted under the pressure of time can lead to other difficulties, including incomplete stratigraphical studies, detachment of the movable finds from the traces of buildings,¹¹ and incomplete interpretations of items later destroyed by lack of preservation or the flimsiness of the materials from which they were originally made, thus delaying or preventing publication.¹² There are thus constraints that archaeology is sometimes incapable of overcoming, and these have already been noted.¹³

The outcome of this impossibility of applying the proper method is that the archaeological picture of important cities of the empire (such as Thessalonike, Nicaea, or Corinth) is disappointing, while there are small provincial centers (such as Kherson or Preslav) that happened not to be inhabited at a later date, could thus be excavated systematically and without pressure, and have produced impressive results.

In cities,¹⁴ the so-called new archaeology, which focuses on the remains of material

⁸ See G. D. R. Sanders, “Corinth,” *EHB* 647, on the situation as it is today in Corinth.

⁹ They take place when the owner of a piece of land wishes to construct a new building whose foundations will cut through the Byzantine strata. Of course, the boundaries of modern plots of land bear no relation to the medieval fabric of the city, and this means that it is rare for a medieval building to be excavated in its entirety. It is thus impossible to plan these rescue excavations or impose a uniform system of assessing the finds from them. The results of such excavations are published, in Greece, in the *Χρονικά τοῦ Ἀρχαιολογικοῦ Δελτίου*.

¹⁰ The examples that spring first to mind, among many others, are in *ΑΔ* 35.2 (1980): 111–113 and 158–59; *ΑΔ* 36.2 (1981): 367; *ΑΔ* 37.2 (1982): 165–69.

¹¹ This was usually the result of initiatives taken by classical archaeologists in a hurry to reach the strata of classical antiquity. For an example of detachment, see G. D. R. Sanders, *Excavations at Sparta* = *BSA* 88 (1993), “Medieval Pottery,” 251–86, pls. 23–26.

¹² See G. Daux, *Les étapes de l'archéologie* (Paris, 1958), 106.

¹³ Russell, *Transformations*, 139, 150.

¹⁴ “New archaeology” focuses largely on the villages and the countryside, where the primary production of commodities took place. See A. Guillou and L. Mavromatis, “Μεσαιωνική Ἀρχαιολογία,” *Βυζαντινά* 6 (1976): 187–89; E. Zanini, *Introduzione all'archeologia Bizantina* (Rome, 1994), chaps. 1–4. For the periods examined here, see principally pp. 164–71.

culture and on information of historical value, has made use primarily of pottery (since earthenware vessels do not deteriorate over time) and coins. The obviously great significance of the latter as evidence for dating archaeological strata, and above all as sources for economic history, is developed elsewhere. Unfortunately, however, opportunities for implementing “new archaeology” are few and far between, especially in Greece and Turkey, where the most important post-iconoclastic cities were located.

Apart from archaeological excavation, the study of a medieval city involves the following stages of work: (a) unification of all the surveys of the built evidence (produced either by excavation or by investigation of the surviving buildings) into a single general plan of the situation as it is today; (b) reconstruction of the urban fabric during the various periods; (c) identification of the functions of rooms and buildings and of land uses; with the assistance of movable finds, emphasis on matters connected with the process of production; (d) reciprocal interpretation, where feasible, involving the finds and the written information; and (e) a study of the growth of each city, settlement, or ekistic unit and interpretation of that growth in historical terms. Needless to say, this ideal study model has never been completely applied in even a single instance of a Byzantine city. The most successful approaches have been in those few urban centers where, as noted, systematic excavations were possible.¹⁵

It should also be borne in mind that in many cases the only urban elements suitable for study are the fortification walls and the surviving churches, whose significance for economic history is limited and in any case indirect. However, walls did determine the area of the medieval city, and this seems to be connected with another important desideratum: estimates of population. Yet there are serious reservations here as to the ratio of the walled area to the number of inhabitants of the city.

The foregoing can be seen as an introduction to the methodological problems and true conditions in which research into Byzantine cities is carried out; it serves to show the extent to which the subject is unready for academic treatment. The text that follows is a classification of certain fragmentary yet accessible information and an attempt to draw some conclusions of real interest for the economic history of Byzantium.

The capital of the empire, Constantinople, has not been included in this examination for a number of reasons: the empire was structured in a way that endowed the city with priority in every respect and with a significance quite different from that of every other city; there is very little purely archaeological information about Constantinople, although the written sources provide an abundance of data; thanks largely to the city's geographical position, to the state monopolies based there,¹⁶ to the number of specialized craftsmen (such as experts in wall-mounted mosaics), and to the large population, economic activity in Constantinople was much greater than in any other city of the empire;¹⁷ and Constantinople was also a major consumer center, into which flowed the

¹⁵ As noted above, representative examples are to be found in Kherson, Preslav, and Tŭrnovo.

¹⁶ Especially of luxury goods, weapons, and other items as circumstances dictated. See A. J. Cappel, “Monopoly,” *ODB*, 1399.

¹⁷ See Guillou, *La civilisation*, 305–8.

goods produced in the provinces. Eloquent testimony to this is to be found in an extract from a letter by Michael Choniates.¹⁸

It is generally accepted that for the lengthy period of two hundred years after the late sixth century Byzantium was in a state of constant crisis, struggling to survive under unrelenting external pressure. It would be an error to generalize, since, on the one hand, there are chronological and geographical variations and, on the other, the collapse did not take place overnight or throughout the entire state. Even so, the discontinuation of the ancient mode of urban life in the provinces and the aspect of the cities (as it emerges, primarily, from archaeological research) are such as to persuade us¹⁹ that there was indeed a general crisis during the so-called Dark Ages and that the functions of the cities became confined to those of defense. Many cities were abandoned altogether, and there was a major drop in the population. However, for the reasons already explained, the important historical problems connected with the continuity or discontinuity of the cities are not ready for solution, and they certainly do not form part of the direct object of this chapter.²⁰

The revival and slow recovery of the cities and towns was, once again, a phenomenon that varied chronologically and geographically. It began in the late eighth century and built up, at an accelerating pace, to a climax in the tenth, eleventh, and twelfth centuries. Little by little, the “ruralized” fortress town gave way once again to cities with a secondary sector of production, urban amenities, and a growing population. However, it is indicative of their continued major importance as defensive refuges that they retained the name *kastron* to the end of the empire.

The middle Byzantine cities of Greece and Asia Minor can be divided into three

¹⁸ Sp. Lambros, *Μιχαὴλ Ἀκομινάτου τοῦ Χωνιάτου τὰ σωζόμενα* (Athens, 1880), 2:83: Οὐ Μακεδονίας καὶ Θράκης καὶ Θεσσαλίας πυροφόροι πεδιάδες ὑμῖν γεωργοῦνται, οὐχ ὑμῖν ληνοβατεῖται οἶνος ὁ Εὐβοεὺς καὶ Πτελεατικὸς καὶ Χίος καὶ Ρόδιος, οὐ τὰς ἀμπεχόνας ὑμῖν ἱστουργοῦσι Θηβαῖοι καὶ Κορίνθιοι δάκτυλοι, οὐ χρημάτων πάντες ὁμοῦ ποταμοὶ ὥς ἐς μίαν θάλασσαν τὴν βασιλίδα πόλιν συρρέουσιν; (Are not the wheat-bearing plains of Macedonia and Thrace and Thessaly farmed for you, and is not the wine of Euboea and Pteleon and Chios and Rhodes trodden for you, and are not cloaks woven for you by the fingers of Thebans and Corinthians, and do not all the rivers of money alike pour, as if into one sea, into the imperial city?). On the topography of Constantinople, see the contribution of P. Magdalino, “Medieval Constantinople: Built Environment and Urban Development,” *EHB* 529–37.

¹⁹ The fact that we have no information either from the written sources or from archaeology is nothing more or less than an argument *ex silentio*. It can be assumed that a whole host of factors, varying according to circumstance and of which we are ignorant, led to the result in question, which is itself unclear in character. See also Russell, “*Transformations*.”

²⁰ For a very brief account, see the three publications by Kazhdan cited above, note 1, and his review of C. Foss, *Byzantine and Turkish Sardis* (Cambridge, Mass., 1976) in *Βυζαντινά* 9 (1977): 481–83. See also Sp. Vryonis, Jr., *The Decline of Medieval Hellenism in Asia Minor and the Process of Islamization from the Eleventh through the Fifteenth Century* (Berkeley, 1971), 7–14; idem, “An Attic Hoard of Byzantine Gold Coins (668–741) from the Thomas Whittemore Collection,” *Mélanges Georges Ostrogorsky = Zbornik Radova* 8 (1963): 1:291–300; D. Zakythenos, *Ἡ Βυζαντινὴ Ἑλλάς, 392–1204* (Athens, 1965), 36–52; G. Ostrogorsky, “Byzantine Cities in the Early Middle Ages,” *DOP* 13 (1959): 45–66; idem, “Byzantium in the Seventh Century,” *DOP* 13 (1959): 3–21; C. Mango, *Byzantine Architecture* (New York, 1976), 161; Guillou, *La civilisation*, 263–304. See also F. Trombley, “Byzantine ‘Dark Age’ Cities in a Comparative Context,” in *TO EΛΛΗΝΙΚΟΝ: Studies in Honor of Speros Vryonis, Jr.*, vol. 1, *Hellenic Antiquity and Byzantium*, ed. J. S. Langdon et al. (New York, 1993), 429–49.

categories: those that were long established and had survived the crisis, old cities that were revived, and new cities. The distinction between the first two categories is not always easy to draw. The fact that bishoprics and metropolitan sees continued to exist throughout the Dark Ages is evidence of survival,²¹ but not proof. The resettling of a site of strategic and productive importance where there was an abundance of building materials does not coincide precisely with the meaning of the term *revival*; in effect, these, too, were new towns, without memories or experiences of the old cities on whose ruins they stood. In cities that survived, archaeology may reach the conclusion that a section was abandoned for a long period (e.g., the southern extremity of the Kadmeia of Thebes²²) or that the entire city moved to a site nearby: Ephesos shifted to the hill of Theologos,²³ and Colossae,²⁴ too, relocated to a nearby height and changed its name to Chonai.

In addition to Thessalonike, the following cities are among those that survived without interruption from antiquity: Nicaea,²⁵ Smyrna,²⁶ Ankyra, Chalcedon, and distant Kherson;²⁷ in Greece, Athens, Corinth, and very probably Thebes. The cities that were abandoned and later revived include Pergamon,²⁸ Patras (whose inhabitants took refuge in Calabria for a while),²⁹ Lakedaimon (whose population also fled, for a time, to Monemvasia), Karyoupolis,³⁰ Stratos in Akarnania³¹ (though we do not know what it was called in the period under consideration), Miletos,³² Priene,³³ Sardis³⁴ (which became a small town around a strong fortification), Attaleia, Arta (on the ruins of ancient Ambrakia), and Polystylon, Peritheorion, and Mosynoupolis in western Thrace.³⁵ As

²¹ See the observations in Vryonis, *Decline*, 8 and 9, and in particular n. 27.

²² See A. Keramopoulos, "Θηβαϊκά," *ΑΔ* 3 (1917): 11, 14, 17, 19, 20.

²³ C. Foss, *Ephesus after Antiquity: A Late Antique, Byzantine and Turkish City* (Cambridge, 1979), 103ff.

²⁴ W. M. Ramsay, *The Cities and Bishoprics of Phrygia* (Oxford, 1895), 1:108–216.

²⁵ For the city of Nicaea, its economy, and the relevant bibliography, see M. Angold, *A Byzantine Government in Exile: Government and Society under the Laskarids of Nicaea (1204–1261)* (Oxford, 1975), passim, but esp. 109, 111.

²⁶ Foss, "Twenty Cities," 481, 482.

²⁷ See A. Bortoli and M. Kazanski, "Kherson and Its Region," *EHB*.

²⁸ See K. Rheidt, "The Urban Economy of Pergamon," *EHB*, and idem, *Die Stadtgrabung*, pt. 2, *Die Byzantinische Wohnstadt* (Berlin, 1991), with a complete analysis of the finds. See also the review of this book by U. Peschlow in *BZ* 87 (1993–94): 151–54, and K. Rheidt, "Byzantinische Wohnhäuser des 11. bis 14. Jahrhunderts in Pergamon," in *DOP* 44 (1990): 195–204.

²⁹ According to the Chronicle of Monemvasia. The first reference that springs to mind is A. Bon, *Péloponnèse byzantin* (Paris, 1951), 34.

³⁰ See R. Etzeoglou, "Καρυούπολις, μία έρειπωμένη βυζαντινή πόλη," *Λακ.Σπ.* 9 (1988): 3–60.

³¹ See E. L. Schwander, "Stratos am Acheloos, ή πόλις φάντασμα," in Φηγός. Τιμητικός τόμος για τόν καθηγητή Σωτήρη Δάκαρη (Ioannina, 1994), 459–65.

³² W. Müller-Wiener, "Mittelalterliche Befestigungen in Südlichen Ionien," *IstMitt* 11 (1961): 28–32.

³³ *Ibid.*, 49–52.

³⁴ C. Foss, *Byzantine and Turkish Sardis* (Cambridge, Mass., 1976), and C. Foss and J. A. Scott, "Sardis," *EHB*.

³⁵ C. Bakirtzis, "Western Thrace in the Early Christian and Byzantine Periods," *ByzF* 14 (1989): 43–58. The three cities were built on the sites of Abdera, Anastasioupolis, and Maxianoupolis, respectively. See also N. Moutsopoulos, "Buru-Kale," *IBI Bulletin* 42 (1984): 101–10 (Anastasioupolis, Peritheorion 2).

examples of new cities produced by synoecism during and after the Dark Ages, one could mention Monemvasia,³⁶ Servia,³⁷ Katoche,³⁸ Strobilos,³⁹ and a number of towns in what is now Bulgaria,⁴⁰ Preslav,⁴¹ and others.⁴² In the late Byzantine period, the renewed conditions of insecurity in Greece dictated the construction of new cities on strong sites: these include Mistra (in 1264, with Lakedaimon being abandoned), Geraki,⁴³ Mouchli,⁴⁴ Rogoi,⁴⁵ and Angelokastron.⁴⁶

The phenomenon that accompanied the growing prosperity of the provinces after the mid-eleventh century was the expansion of some cities outside their walls. This can be studied in the cities of Thebes, Monemvasia, and Athens. In Thebes,⁴⁷ around the fortified Kadmeia,⁴⁸ settlements were established, principally during the twelfth century, on the hills called Kastellia, Hagioi Theodoroi, Ismeneion, and Ampheion. New finds⁴⁹ have confirmed the striking size of the area over which the city expanded. In Monemvasia, the lower city was constructed along the south shore of the promontory;⁵⁰ finds from this site date its founding to the middle Byzantine period.⁵¹ Our picture of the settlements outside the late Roman walls of Athens, in the ancient Agora, in the Kerameikos, and in the area of the temple of Olympian Zeus, remains unchanged.⁵²

³⁶ H. Kalligas, *Byzantine Monemvasia: The Sources* (Monemvasia, 1990), *passim*.

³⁷ A. Xyngopoulos, *Tà μνημεῖα τῶν Σερβίων* (Athens, 1957).

³⁸ V. Katsaros, "Συμβολὴ στὴν ἱστορία καὶ τὴν μνημειακὴ τοπογραφία τοῦ χωριοῦ Κατοχή Ἀκαρνανίας," *Ἑλληνικά* 30 (1977–78): 307–20.

³⁹ C. Foss, "Strobilos and Related Sites," *AnatSt* 38 (1988): 147–74.

⁴⁰ Kazhdan and Epstein, *Change*, 33 nn. 33–38.

⁴¹ See I. Jordanov, "Preslav," *EHB*.

⁴² See Bakirtzis, "Western Thrace"; the new cities included Maroneia, Synaxis by Maroneia, Xanthia, Gratzianou, and Paterma.

⁴³ For the settlement at Kastro, see P. Simatou and R. Christodouloupoulou, "Παρατηρήσεις στὸν μεσαιωνικὸ οἰκισμὸ τοῦ Γερακίου," *Δελτ.Χριστ.Ἀρχ.Ἐτ.* 15 (1989–90): 67–88.

⁴⁴ M. Moutsopoulos, "Βυζαντινὰ σπίτια στὸ Μουχλὶ Ἀρκαδίας," *Βυζαντινά* 13.1 (1985): 321–53.

⁴⁵ G. Sotiriou, "Τὸ κάστρο τῶν Ρωγῶν," *Ἡπειρωτικὰ Χρονικά* 2 (1927): 98–109, and *ΑΔ* 35.2 (1980): 323–24.

⁴⁶ A. K. Orlandos, "Τὸ φρούριον τοῦ Ἀγγελοκάστρου," *Ἀρχ.Βυζ.Μνημ.Ἑλλ.* 9 (1961): 49–73.

⁴⁷ For questions relating to Thebes, see A. Louvi-Kizi, "Thebes," *EHB*, with recent bibliography. See also S. Symeonoglou, *The Topography of Thebes* (Princeton, N.J., 1985), 156–72. For important information about the Byzantine city, see N. Oikonomides, "The First Century of the Monastery of Hosios Loukas," *DOP* 46 (1992): 253ff.

⁴⁸ Bouras, "City and Village," 624–25 nn. 98–99, and Symeonoglou, *Topography*, fig. 42.

⁴⁹ *ΑΔ* 33.2 (1975): 100, pl. 39a (the Koropoules site); *ΑΔ* 34.2 (1979): 166; *ΑΔ* 37.2 (1982): 170; *ΑΔ* 41.2 (1986): 27, drawing 3; *ΑΔ* 41.2 (1986): 29–30, pl. 52c (New Thebes, southeast of the Kadmeia). The wall of Byzantine Thebes, with a special arrangement to allow the passage of a seasonal river, has been identified near the railway station (unpublished).

⁵⁰ It is very difficult to date with accuracy buildings in the lower city, such as the church of Christ Helkomenos, which are supposed to be older. Traces of earlier structures have been discovered in the upper city. See Kalligas, *Byzantine Monemvasia*, 30 n. 41. For a topographical drawing of the town immediately after the war of independence, in which elements of the medieval urban fabric have survived, see B. Dorovines, "Μονεμβασία: Ὁ οἰκισμὸς καὶ τὰ δημόσια κτήρια κατὰ τὴν Καποδιστριακὴ ἐποχὴ," *Ἀρχαιολογία* 54 (1995): 69–80.

⁵¹ *ΑΔ* 29.2 (1973–74): 420–21, and Kalligas, *Byzantine Monemvasia*, 65–66 n. 84.

⁵² See Bouras, "City and Village," 625–26 nn. 110–31, and M. Kazanaki-Lappa, "Medieval Athens,"

Unfortunately, this phenomenon cannot be studied in the Byzantine cities where the location of the circuit of walls has not been determined, as in the cases of Argos, Lakdaimon, Euripos, and many other instances. However, the scanty evidence does point to a process of urban expansion known to us from the cities of western Europe, here interrupted by the Frankish conquest: the growth of a settlement (called a *bourgo* or a *varoshi*) outside the castle, which might or might not have walls and which was easier to adapt to the urban functions of manufacturing and trade.⁵³

It has to be stressed once more that the evolutionary pattern of Byzantine cities briefly described above varied to some extent from time to time and from place to place.⁵⁴ The economy began to revive, and cities to become more active, at an earlier date in Asia Minor, where the process also came to an end earlier, after 1071, with the permanent settlement in the area of the Seljuks. In Greece, it was only at a later time, with the recovery of Crete and the end of the Bulgarian wars, that development could begin. During the period of the Laskarid emperors, some of Asia Minor prospered again (on a local level), and this is manifest both in the vitality of the settlements⁵⁵ and in the general building activities.⁵⁶

This is not the place for an examination of the physical parameters of choice of location and scope for growth of the Byzantine cities, particularly since very many of them were built on the sites of ancient cities founded under quite different conditions. Questions of terrain are connected primarily with the natural defensive strength of the site and the very considerable attention that the inhabitants paid to defense. This also applied to water resources, which will be dealt with in connection with city water supplies. Where communications (discussed at length elsewhere)⁵⁷ were concerned, Byzantine cities differed from those of medieval Europe by rarely⁵⁸ being located on navigable rivers; they communicated with one another principally by sea. This is not to say that overland routes and transportation using pack animals were of little importance: the construction or maintenance of a bridge⁵⁹ was significant on the local scale, and

EHB 642–44, which makes use of the information provided by the *praktikon* (E. Granstrem, I. Medvedev, and D. Papachryssanthou, “Fragment d’un *praktikon* de la région d’Athènes (avant 1204),” *REB* 34 [1976]: 5–44). Unfortunately, the deaths of I. Travlos and A. Frantz make it unlikely that the middle Byzantine settlement of the Agora in Athens will ever be published; they had undertaken to study the remains of houses on a site that has now vanished. See, in this respect, I. Travlos, *Πολεοδομική εξέλιξις της πόλεως τῶν Ἀθηνῶν* (Athens, 1960), 151 n. 3.

⁵³ A full picture of the phenomenon is to be found in cities that developed at a later date, under foreign sovereignty, such as Crete, Rhodes, Chios, and Cyprus.

⁵⁴ Kazhdan and Epstein, *Change*, 37, 38; Vryonis, *Decline*, 6–34; Bouras, “City and Village,” 633.

⁵⁵ Such as those of Pergamon (see Rheidt, “Pergamon”) and Ephesos (cf. Foss, *Ephesus*, 136, 137).

⁵⁶ H. Buchwald, “Laskarid Architecture,” *JÖB* 28 (1979): 261–96.

⁵⁷ See A. Avramea, “Land and Sea Communications, Fourth–Fifteenth Centuries,” *EHB*.

⁵⁸ Katoche is one such instance; see Katsaros, “Συμβολή.”

⁵⁹ P. Armstrong, W. G. Cavanagh, and G. Shirpley, “Crossing the River,” *BSA* 87 (1992): 293–310 (with a reference to the bridge over the Eurotas, known from an inscription of 1027). See also N. Moutsopoulos, *Ἡ ἀρχιτεκτονική τῶν ἐκκλησιῶν καὶ τῶν μοναστηριῶν τῆς Γορτυνίας* (Athens, 1956), 121–24 (of 1440, near Karytaina).

some of the large ancient roads from city to city seem still to have functioned,⁶⁰ even though for centuries they had been completely abandoned. Cities sited at the intersection of land and sea routes—such as Constantinople itself, Corinth,⁶¹ and even distant Kherson⁶²—or where major roads arrived in safe harbors (such as Dyrrachion and Thessalonike) were clearly in a position of advantage.

The walls that surrounded the cities are usually directly accessible to archaeologists.⁶³ As buildings, Byzantine walls were of a dynamic nature in the sense that they could be adapted in accordance with needs, being repaired after sieges and following rules of economy and functionality where the art of war was concerned. It is characteristic that in the cases of cities such as Constantinople,⁶⁴ Thessalonike,⁶⁵ and Nicaea,⁶⁶ which were very heavily and systematically fortified during the fifth century, the walls did not remain unchanged over the centuries. The picture is even more instructive in the provincial cities of Asia Minor and Greece, where fortifications were raised under the pressure of circumstances, reusing ancient materials and on the principle of keeping the length of each section to a minimum so as to minimize the number of warriors that would be required. It was far from uncommon for walls to be built above sections, or on the foundations, of earlier fortifications (dating from ancient Greek or late Roman times, or constructed under Justinian), and this in turn sometimes imposed constraints on the medieval city (size, position of towers and gates, etc.).

As a rule, fortified Byzantine cities possessed an acropolis, of limited area and strictly military in nature, which in the case of an enemy attack would be the last line of defense. To control the acropolis was to control the city. Indeed, in Thessalonike there was a separate enclave inside the acropolis—the Heptapyrgion⁶⁷—and there seems to have been a similar structure in Berroia,⁶⁸ though it has not survived. In fortified monasteries, which were miniature cities,⁶⁹ the role of the acropolis was played by a strong square tower.⁷⁰

⁶⁰ See Foss and Scott, "Sardis," 615, and C. Mango, "Egnatia, Via," *ODB* 679; cf. Avramea, "Communications," 62–63.

⁶¹ For the problem of the operation of the Diolkos at Corinth, see Sanders, "Corinth," 650. Cf. R. Stillwell et al., *Introduction, Topography, Architecture*, Corinth 1.1 (Cambridge, Mass., 1932), 49, 50, and G. Raepsaet, "Le diolkos de l'isthme à Corinthe: Son tracé, son fonctionnement," *BCH* 117 (1993): 233–56, esp. 243, 247, 255.

⁶² Bortoli and Kazanski, "Kherson," 659. The city stood on an excellent site at the estuary of important navigable rivers.

⁶³ See C. Foss and D. Winfield, *Byzantine Fortifications: An Introduction* (Pretoria, 1986).

⁶⁴ A. M. Schneider and B. Meyer, *Die Landmauer von Konstantinopel*, 2 vols. (Berlin, 1943); B. C. P. Tsangadas, *The Fortification and Defense of Constantinople* (New York, 1980).

⁶⁵ O. Tafrali, *Thessalonique au quatorzième siècle* (Paris, 1913), 30–114; J.-M. Spieser, *Thessalonique et ses monuments du IV^e au VI^e siècle* (Paris, 1984), 25–80; T. Gregory, "Thessalonike," *ODB* 2072–73.

⁶⁶ A. M. Schneider and W. Karnapp, *Die Stadtmauer von Iznik* (Berlin, 1938); Foss and Winfield, *Fortifications*, 79–117, figs. 261–81.

⁶⁷ Tafrali, *Thessalonique*, 145, 193. *AA* 35.2 (1980): 378; *AA* 36.2 (1981): 308.

⁶⁸ *Ioannis Cantacuzeni Historiarum libri quattuor*, ed. L. Schopen (Bonn, 1831–32), 3:120 (IV.18) (hereafter Kantakouzenos).

⁶⁹ A. K. Orlandos, *Μοναστηριακὴ ἀρχιτεκτονική* (Athens, 1958), 7.

⁷⁰ *Ibid.*, 134–37.

There are numerous examples that allow us to study the form of the walls and the location and area of the acropolis. At Corinth⁷¹ and Argos⁷² the acropolis stood at some distance from the town. In Thebes, things are not so clear; the acropolis may have occupied the north extremity of the Kadmeia, where the palace and the strong Frankish tower later stood.⁷³ In Athens,⁷⁴ there are still the problems⁷⁵ of the ancient walls (which the *praktikon* calls “imperial”) and of dating Rizokastro.⁷⁶ In Asia Minor, we possess important information about the fortifications of Ankyra,⁷⁷ Miletos,⁷⁸ Priene,⁷⁹ Smyrna,⁸⁰ and Philadelphia.⁸¹ Information has been published recently about the Byzantine fortresses of Larissa,⁸² Pangaion,⁸³ Naupaktos,⁸⁴ Ioannina,⁸⁵ Drama,⁸⁶ Rhodes,⁸⁷ and Kherson.⁸⁸

In many Byzantine cities, a cross-wall (*diateichisma*) has survived. Its exact function is not known for certain, but it provided an extra line of defense. In Constantinople, the earlier cross-wall built by Constantine was retained, and we know that the area

⁷¹ It is not known whether the commander's seat was permanently on the Acrocorinth or only moved there in emergencies. See Sanders, “Corinth,” 649–50.

⁷² The Byzantine castle of Argos underwent major alterations under Frankish rule. See A. Bon, *La Morée franque*, 2 vols. (Paris, 1969), 2: pls. 134–36, 139.

⁷³ Louvi-Kizi, “Thebes,” 635, and Symeonoglou, *Topography*, 161, 164, 229.

⁷⁴ Cf. Kazanaki-Lappa, “Medieval Athens,” 641, 643; K. M. Setton, “The Archaeology of Medieval Athens,” in *Essays on Medieval Life and Thought Presented in Honour of Austin Patterson Evans* (New York, 1955), 227–58.

⁷⁵ Travlos (Πολεοδομική εξέλιξις, 161) hypothesized that in middle Byzantine times the city was protected by the classical wall, which had been repaired (pl. VIII). The great length of this wall makes the hypothesis highly questionable.

⁷⁶ E. Makri, K. Tsakos, and A. Vavyloupoulou-Charitonidou, “Τὸ Ριζόκαστρο. Σωζόμενα ὑπολείμματα. Νέες παρατηρήσεις, καὶ ἐπαναχρονολόγησις,” *Δελτ.Χρυστ.Ἀρχ.Ἐτ.* 14 (1987–88): 329–63, with the earlier bibliography. See also M. Korres, “Χρονικά,” *ΑΔ* 35.2 (1990): 18–19. For the Byzantine settlement on the south slope of the Acropolis, see also *ΑΔ* 40.2 (1985): 10.

⁷⁷ C. Foss, “Late Antique and Byzantine Ankara,” *DOP* 31 (1983): 27–87.

⁷⁸ G. Kleiner, *Die Ruinen von Milet* (Berlin, 1968), 21, 140, and Müller-Wiener, “Mittelalterische Befestigungen,” 28–32, figs. 5–7.

⁷⁹ Müller-Wiener, “Mittelalterische Befestigungen,” 49–52, figs. 10–11.

⁸⁰ W. Müller-Wiener, “Die Stadtfestigungen von Izmir, Sigacik und Candepli,” *IstMitt* 12 (1962): 59–104.

⁸¹ A. Pralong, “Les remparts de Philadelphie,” in *Philadelphie et autres études* (Paris, 1984), 101–26.

⁸² *ΑΔ* 31.2 (1976): 187, pl. 133a.

⁸³ *ΑΔ* 32.2 (1977): 271–72.

⁸⁴ G. Marinou, “Ἡ ἀρχιτεκτονικὴ τῆς Ναυπάκτου κατὰ τὴν Ἑνετοκρατίαν καὶ τὴν Τουρκοκρατίαν,” *Ἡπειρωτικὰ Χρονικά* 27 (1985): 127–38, figs. 13–20; *ΑΔ* 33.2 (1978): 168–69.

⁸⁵ A. Vranousis, “Ἱστορικά καὶ τοπογραφικά τοῦ μεσαιωνικοῦ κάστρου τῶν Ἰωαννίνων,” in *Χαρτίσιον εἰς Ἀ. Κ. Ὁρλάνδον*, 4 vols. (Athens, 1965–68), 4:439–515, pls. CX–CXXIV, and *ΑΔ* 33.2 (1978): 188–89, figs. 1–2.

⁸⁶ *ΑΔ* 23.2 (1968): 370, pl. 323; *ΑΔ* 35.2 (1980): 439; *ΑΔ* 40.2 (1985): 281–82. G. Velenes and K. Triantaphyllides, “Τὰ βυζαντινὰ τεῖχη τῆς Δράμας. Ἐπιγραφικὲς μαρτυρίες,” *Βυζαντικά* 11 (1991): 97–116.

⁸⁷ E. Kollias, *The City of Rhodes and the Palace of the Grand Master* (Athens, 1988), 61, 63; idem, “Τοπογραφικά προβλήματα τῆς μεσαιωνικῆς ἀγορᾶς τῆς Ρόδου,” in *Ἱστορία καὶ προβλήματα συντήρησης τῆς μεσαιωνικῆς πόλης τῆς Ρόδου. Πρακτικά* (Athens, 1992), 82, 93, 96–97, 106.

⁸⁸ Bortoli and Kazanski, “Kherson,” 659.

between it and the walls of Theodosios was not densely inhabited.⁸⁹ Cross-walls (with perimeter walls and the acropolis) can thus be studied in Karyoupolis,⁹⁰ Rogoi,⁹¹ Vouthroton,⁹² Servia,⁹³ Serres,⁹⁴ Arta,⁹⁵ Apollonia,⁹⁶ Amorion,⁹⁷ Ephesos,⁹⁸ and the cities of Pontos.⁹⁹ In Preslav, the acropolis was located in the center of the city, not at its edge.

The *Strategikon* of Kekaumenos gives instructions of all kinds for the defending of *kastra*, the most important of which was that houses should never abut on the walls.¹⁰⁰ This rule does not, however, always seem to have been kept. Naturally enough, there were also cases in which the natural defensive strength of sharply sloping ground was exploited.¹⁰¹ Instances such as Zichna¹⁰² and Mouchli¹⁰³ are typical of this, as is the site of Tŭrnovo,¹⁰⁴ which was protected by natural streambeds. We can see from the book by Kekaumenos and from other manuals of strategy¹⁰⁵ that walls were not, in themselves, sufficient; preparations for sieges also involved the construction of special engines and the employment of craftsmen of many skills, which would certainly have involved a considerable outlay on the part of the state.¹⁰⁶

Provincial Byzantine cities were usually small in area¹⁰⁷ and densely populated, with all that that implied for the hygiene and comfort of the inhabitants. The interior of the castle of Sardis is a case in point. Thessalonike retained its early Christian boundaries because both the harbor of Constantine and the acropolis, located at opposite corners

⁸⁹ Mango, *Byzantium*, 76.

⁹⁰ Etzeoglou, "Καρυούπολις," p. 53, drawing 5, p. 40.

⁹¹ Soteriou, "Ρωγών," and ΑΔ 35.2 (1980): 324, drawing 7.

⁹² L. Ugolini, *Il mito d'Enea: Gli scavi* (Rome, 1937), 165–70.

⁹³ Xyngopoulos, Τὰ μνημεῖα τῶν Σεργίων, 17, 19; ΑΔ 40.2 (1985): 251; ΑΔ 41.2 (1986): 167.

⁹⁴ A. Xyngopoulos, Ἐρευναι εἰς τὰ βυζαντινὰ μνημεῖα τῶν Σεργίων (Thessalonike, 1965), 2–21; ΑΔ 33.2 (1978): 315–16.

⁹⁵ A. K. Orlandos, "Τὸ κάστρον τῆς Ἀρτης," Ἀρχ.Βυζ.Μνημ. Ἑλλ. 2 (1936): 151–60, and D. Zivas, "The Byzantine Fortress of Arta," *IBI Bulletin* 19 (1964): 33–43.

⁹⁶ H. and H. Buschhausen, *Die Marienkirche von Apollonia* (Vienna, 1976), 268, fig. 2.

⁹⁷ R. M. Harrison, "Amorium 1987," *AnatSt* 38 (1988): 175–84, figs. 2–3.

⁹⁸ Foss, *Ephesus*, 111.

⁹⁹ A. Bryer and D. Winfield, *The Byzantine Monuments and Topography of the Pontos*, 2 vols. (Washington, D.C., 1985), 69–88, 107, 126, 186–90, figs. 43, 44, p. 331, fig. 118.

¹⁰⁰ Kekaumenos, *Strategikon*, in *Sovety i rasskazy Kekavmena*, ed. G. Litavrin (Moscow, 1972), chap. 32 (hereafter Kekaumenos).

¹⁰¹ *Ibid.*, chaps. 13, 30, 31, 74.

¹⁰² N. Moutsopoulos, "Τὸ βυζαντινὸν κάστρο τῆς Ζίχνας," Ἐπιστημονικὴ Ἐπετηρὶς τῆς Πολυτεχνικῆς Σχολῆς τοῦ Ἀριστοτελείου Πανεπιστημίου Θεσσαλονίκης 10 (1986): 161–338.

¹⁰³ Moutsopoulos, "Βυζαντινὰ σπίτια."

¹⁰⁴ See K. Dochev, "Tŭrnovo, Sixth–Fourteenth Centuries," *EHB* 673. Cf. N. Moutsopoulos, "Pensées et observations à l'occasion des fouilles archéologiques récentes à la Grande Laure aux pieds de Tzarevez à Veliko Tŭrnovo: Tours rondes et passages souterraines aux fortifications médiévales," *BalkSt* 26 (1985): 3–9.

¹⁰⁵ For these manuals of strategy, see A. Dain, "Les stratèges byzantins," *TM* 2 (1967): 317–92, and J. Teall, "Byzantine Urbanism in the Military Handbooks," in *The Medieval City*, ed. H. A. Miskimin, D. Herlihy, and A. L. Udovitch (New Haven, 1977), 201–5.

¹⁰⁶ Teall, "Urbanism," 204, and Kekaumenos, chap. 33.

¹⁰⁷ Mango, *Byzantium*, 62.

of the rectangular walled city, had to be kept in use. As a result, no suburbs were created outside the walls, while much of the interior of the city was left unused.¹⁰⁸ Fortress cities (*kastra*) had to possess a certain amount of empty land, on which villagers from the surrounding countryside could be accommodated when, in the event of enemy attack, they sought refuge in the castle.¹⁰⁹ There are references in other cases to empty spaces—where crops were cultivated—inside the castle, and at least a rudimentary *pomoerium* had to be left around the inside of the walls. We have absolutely no idea whether the buildings whose foundations have come to light during excavations had one, two, or even more stories.

It may be concluded from the above that the area of a walled city can under no circumstances be taken as a criterion of its population. The central desideratum of economic history—a knowledge of the demographic level—cannot be met. Unfortunately, as Cyril Mango puts it, there is no formula for converting the area measurements of a city into population figures.¹¹⁰

In very few cases has it been possible to plot and study satisfactorily the urban fabric of a Byzantine city. Our evidence is usually fragmentary and leads to roughly the same conclusions: streets were narrow, seldom straight, and of variable width; sometimes they were blind alleys. The impression is one of disorder¹¹¹ and of awkward access to the close-built houses, which were also irregular in shape and small in floor area. This is precisely the picture we would expect to emerge from dynamically developing towns and cities, with problems being resolved as they occurred and in accordance with the constraints imposed by earlier structures. In other cases, such as Sardis¹¹² and perhaps Corinth,¹¹³ the medieval city broke down into small units arranged around a strong nucleus. There are very few cases in which one can discern the existence of a “main street,” rather more regular in its course, broader, and of definitive importance for the shape of the city, though we do have the examples of Thessalonike,¹¹⁴ Serres,¹¹⁵ and the lower city of Monemvasia, where linear development was dictated by the layout of

¹⁰⁸ Kantakouzenos, 3:659 (III.93): πρὸς τὰ τῆς πόλεως μάλιστα ἀοίκητα μέρη (“toward those parts of the city where there [are] no houses at all”). Excavations in the vicinity of the Palace of Galerius and the Hippodrome have demonstrated that in more recent times, at least, this area was uninhabited. Travelers of the 18th century report a forest on the site of the Hippodrome; see A. Vavyloupoulou-Charitonidou, “Céramique d’offrande trouvée dans des tombes byzantines tardives de l’Hippodrome de Thessalonique,” in *Recherches sur la céramique byzantine*, ed. V. Déroche and J. M. Spieser (Paris, 1989), 209 n. 1.

¹⁰⁹ Teall, “Urbanism,” 205.

¹¹⁰ Mango, *Byzantium*, 62.

¹¹¹ As at Corinth, Argos, and Pergamon; cf. C. Bouras, “Houses in Byzantium,” *Δελτ.Χριστ.Ἀρχ. Ἑτ.* 11 (1982–83): 9, 14, 16, and D. Konstantios, “Οὐζντίνα Θεσπρωτίας. Ἡ ἱστορική διαδρομή, ἡ πολεοδομικὴ ἐξέλιξη καὶ τὰ μνημεῖα ἐνός ἀρχαίου καὶ μεσαιωνικοῦ οἰκισμοῦ,” *Δελτ.Χριστ.Ἀρχ. Ἑτ.* 15 (1989–90): 94.

¹¹² Foss and Scott, “Sardis,” 617–18.

¹¹³ Sanders, “Corinth,” 648–49.

¹¹⁴ Tafrahi, *Thessalonique*, 142–44. The two almost parallel streets led to the four main gates of the city: the more northerly ran from the Letaia Gate to that of the Archangels, and the more southerly from the Vardar Gate to the Kassandreiotike Gate. See also below, note 120.

¹¹⁵ Xyngopoulos, “Ἐρευναι,” 2–21; N. Z. Nikolaou, *Σκαπανεῖς τῆς ἱστοριογραφίας καὶ προβλήματα τῆς ἱστορίας τῶν Σερρών* (Thessalonike, 1964), 32ff, pls. I and II.

the ground available. It was equally rare for streets to be given names or to have special uses, though this may have happened in Messene¹¹⁶ and Berroia.¹¹⁷ In the period after the iconoclastic controversy, it was more usual for the great avenues of ancient cities—such as the famous Arcadiane in Ephesos—to be buried beneath dense settlements of small houses.¹¹⁸ In the new cities of later Byzantium (Mistra, Geraki, Mouchli, etc.), the steeply sloping ground meant that most of the streets were stepped and could not be used by wheeled traffic. The dynamic, rather than predetermined, growth of the city and the difficulties involved in transport in its interior are clearly of great significance for the economy, but the subject does not seem to have been studied to date.

In a limited number of middle Byzantine cities—Nicaea,¹¹⁹ perhaps Thessalonike,¹²⁰ Rhodes (in accordance with recent research),¹²¹ Sinope,¹²² and Kherson¹²³—we find the survival of an ancient regular town planning system, with a grid of streets running at right angles to each other. The sole instance of a new grid plan being employed during the period in question is known only from textual evidence: the account is in the problematic *Timarion*,¹²⁴ which describes the temporary huts or tents of the great fair outside the west walls of Thessalonike being arranged in a regular rectangular pattern.¹²⁵ Presumably the flat plain made it easier to apply a regular plan of “streets.” It seems very likely that the central avenues of these middle Byzantine cities were survivals from the early Christian era or even from antiquity, but this cannot be proved. In Athens, it would seem¹²⁶ that the alignment of the classical Panathenaic Way had survived in the Agora. In other cities, such as Pergamon, Lakedaimon, and Kadmeia at Thebes, we see the survival of streets leading to the castle gates.

The absence of planning and the dynamic manner of growth can be seen in all the new cities of the middle and late Byzantine periods. Mistra is a typical example: there the existing road winding up to the castle continued in use as the main street of the town.¹²⁷ We do not know whether there were any building regulations in Byzantium other than those of Julian of Askalon,¹²⁸ to be found in the *Hexabiblos* of Harmeno-

¹¹⁶ There are references to a δεσποτική and a δημοτική ὁδός. See A. Guillou, *Les actes grecs de S. Maria di Messina* (Palermo, 1963), 150, 152, 180.

¹¹⁷ There is a reference to a gate and street “of the escort” (ὀψικκιανή): Kantakouzenos, 3:123 (IV.18).

¹¹⁸ Foss, *Ephesus*, 113.

¹¹⁹ Schneider and Karnapp, *Die Stadtmauer von Iznik*, pl. II.

¹²⁰ On a surviving town plan of Thessalonike dating from before the fire of 1917 (I. Travlos, in *Ἱστορία τοῦ Ἑλληνικοῦ ἔθνους* [Athens, 1974], 5:471, fig. on p. 474), the rectangular arrangement of the *insulae*, a remnant of the ancient Hippodamian system, can still be distinguished in a significant part of the city. These were very probably also present during the middle and late Byzantine periods.

¹²¹ Kollias, *Rhodes*, 68, 69.

¹²² Bryer and Winfield, *Pontos*, 75, 76, 88, fig. 4.

¹²³ Bortoli and Kazanski, “Kherson,” 659.

¹²⁴ See Kazhdan in *ODB* 2085, dating the *Timarion* to the first half of the 12th century.

¹²⁵ Guillou, *La civilisation*, 299–300.

¹²⁶ Travlos, *Πολεοδομική εξέλιξις*, 156 and folding pl. VIII.

¹²⁷ A. K. Orlandos, “Τὰ παλάτια καὶ τὰ σπίτια τοῦ Μυστρᾶ,” *Ἀρχ.Βυζ.Μνημ. Ἑλλ.* 3 (1937): 9.

¹²⁸ G. Velenis, “Wohnviertel und Wohnhausbau in den byzantinischen Städten,” in *Wohnungsbau im Altertum* (Berlin, 1978), 227–36; D. Gines, “Τὸ Ἐπαρχικὸν Βιβλίον καὶ οἱ νόμοι Ἰουλιανοῦ τοῦ Ἀσκαλωνίτου,” *ΕΕΒΣ* 13 (1937): 183–91.

poulos,¹²⁹ nor do we have any idea of the extent to which even those provisions were enforced in the provinces during the period under consideration.¹³⁰ In a surviving formula of protocol for the foundation of a city,¹³¹ the person responsible for “the settlement and formation of a *kastron*” (τοῦ οἰκῆσαι καὶ συστήσαι κάστρον) does not mention planning or building regulations; the reference is primarily to matters of land ownership.

The presence on the site of earlier building materials was of decisive importance for the character of these old cities. Byzantium was built on the ruins of the ancient world. Without regard for its historical or aesthetic value,¹³² whatever remained of classical and early Christian buildings was reused in every conceivable way. These spolia might be put to a different use after being modified, they might be incorporated as parts of new buildings, or—more usually—they might be demolished so that their materials could be used in the building of new and much more modest structures. The picture revealed by excavations in Byzantine cities is almost completely uniform. The principal advantages of the spolia for the new structures were economy and facility; there are only very occasional cases in which any attempt seems to have been made to convey an impression of historical continuity or a new artistic form.¹³³ At the same time, however, the reuse of spolia created difficulties in the planning of new buildings and tended to cause some degree of inertia in development on the urban scale.

In very many cases, the ancient city walls were reused after minor or extensive supplementation: the cases of Thessalonike,¹³⁴ Smyrna,¹³⁵ Ephesos,¹³⁶ the late Roman walls of Athens,¹³⁷ Amphissa,¹³⁸ Arta,¹³⁹ Nauplia,¹⁴⁰ Uzdhina,¹⁴¹ and Kherson¹⁴² spring immediately to mind. Aside from the conversion of temples into churches, instances of changes of the use of ancient buildings include the converting into water tanks of the temple of Trajan at Pergamon,¹⁴³ of the great temple at Sardis,¹⁴⁴ and of the Agora-

¹²⁹ Konstantinos Harmenopoulos, *Πρόχειρον Νόμων, ἡ Ἑξάβιβλος*, ed. K. Pitsakis (Athens, 1971), 114ff (hereafter *Hexabiblos*).

¹³⁰ See A. Karpozilos, “Περὶ ἀποπάτων, βόθρων, ὑπονόμων,” in *Καθημερινὴ ζωὴ στὸ Βυζάντιο*, ed. Ch. Angelidi (Athens, 1989), 344.

¹³¹ G. Ferrari delle Spade, “Formulari notarili inediti dell’età Bizantina,” *BISI* 33 (1913): 55.

¹³² See, in this respect, Ch. Bouras, “Restoration Work on the Parthenon and Changing Attitudes towards the Conservation of Monuments,” in *The Parthenon and Its Impact in Modern Times*, ed. P. Tournikiotis (Athens, 1994), 314–18.

¹³³ As in the cases of the Gate “of the Persecutions” in Ephesos or of the Virgin Gorgoepekoos in Athens. See also C. Mango, “Ancient Spolia in the Great Palace of Constantinople,” *Byzantine East, Latin West: Art-Historical studies in honor of Kurt Weitzmann* (Princeton, N.J., 1993), 645, 649.

¹³⁴ See M. Vickers, “Hellenistic Thessaloniki,” *JHS* 92 (1972): 156–70.

¹³⁵ A. W. Lawrence, *Greek Architecture* (Harmondsworth, 1962), pl. 117A.

¹³⁶ Foss, *Ephesus*, 111.

¹³⁷ Kazanaki-Lappa, “Medieval Athens,” 640.

¹³⁸ F. W. Winter, *Greek Fortifications* (Toronto, 1971), 158, fig. 136.

¹³⁹ Orlandos, “Τὸ κάστρον τῆς Ἀρτης,” 153 n. 1.

¹⁴⁰ S. Karouzou, *Τὸ Νάυπλιον* (Athens, 1979), 24, figs. 9–12.

¹⁴¹ Konstantios, “Οὐζιντία Θεσπρωτίας,” 91.

¹⁴² Bortoli and Kazanski, “Kherson,” 659.

¹⁴³ Rheidt, “Pergamon,” 625.

¹⁴⁴ Foss and Scott, “Sardis,” 618–19; various manufacturing workshops set themselves up in the ruins of a Roman bath: *ibid.*, 619.

cryptoporticus and the *vestibulum* of the Octagon in Thessalonike; the use of the mosaic floor of an early Christian building in Thebes;¹⁴⁵ the reopening for use of ancient rooms in Argos¹⁴⁶ and Athens;¹⁴⁷ and a host of other examples.¹⁴⁸ I have already discussed the reuse of ancient roads.

The outcome of the absence of planning, of shortages of space, and of the recycling of building materials was that the provincial cities of Byzantium tended to lack a monumental style. Here and there, the chance survival of ancient buildings to their full height or of statues created points of reference in the cities where memories of the classical past were kept alive. This subject is developed by R. Cormack,¹⁴⁹ who deals with the architectural heritage of two dissimilar cities, Thessalonike and Aphrodisias. The way in which the Byzantines viewed this heritage can be studied only in Constantinople, and then solely through the texts.¹⁵⁰ It is characteristic of the situation that Athens and Pergamon, two cities that had retained much of their ancient architectural heritage, impressed those returning to them after stays in the capital.¹⁵¹

Given that most transport in Byzantium took place by sea, harbors were important as places dedicated to the movement of goods and the process of production. Although we have references to various harbors that continued to operate throughout the Middle Ages,¹⁵² we do not know of the construction of even one new harbor after the iconoclastic controversy, and no archaeological traces that might be studied from the point of view of port installations, facilities, and functions have come to light. Little significance was attached to works of infrastructure,¹⁵³ as can be seen in the ease with which one harbor might give way to another: the hinterland of Thessaly, for example, was served successively by the harbors of Thessalian Thebes, Demetrias, Almyros, and lastly Volos.

As for the position of the harbor vis-à-vis the city, we have information about Thessalonike,¹⁵⁴ the cities of Pontos,¹⁵⁵ Ephesos,¹⁵⁶ Smyrna,¹⁵⁷ Strobilos,¹⁵⁸ Monemvasia,¹⁵⁹

¹⁴⁵ AA 36.2 (1981): 189–90.

¹⁴⁶ AA 37.2 (1981): 97.

¹⁴⁷ AA 24.2 (1969): 52; see also below, note 290.

¹⁴⁸ Bouras, "City and Village," 640.

¹⁴⁹ R. Cormack, "The Classical Tradition in the Byzantine Provincial City," in *Byzantium and the Classical Tradition*, ed. M. Mullett et al. (Birmingham, 1979), 104ff.

¹⁵⁰ C. Mango, "L'attitude byzantine à l'égard des antiquités gréco-romaines," in *Byzance et les images*, ed. A. Guillou and J. Durand (Paris, 1994), 97–129; idem, "Antique Statuary and the Byzantine Beholder," *DOP* 17 (1963): 55–75, and H. Saradi-Mendelovici, "Christian Attitudes toward Pagan Monuments in Late Antiquity and Their Legacy in Later Byzantine Centuries," *DOP* 44 (1990): 47–61.

¹⁵¹ See the text of Michael Choniates on Athens (Lambros, *Μιχαὴλ Ἀκομινάτου*, 1:105, 159, 160) and of Theodore Laskaris on Pergamon (S. Antoniadis, "Sur une lettre de Théodore II. Laskaris," *L'Hellénisme contemporaine* [Athens, 1954], 357, 358, 360).

¹⁵² See H. Ahrweiler, "Les ports byzantins (7–9 siècles)," in *La navigazione mediterranea nell'alto medioevo*, 2 vols. (Spoleto, 1978), 1:15–31.

¹⁵³ By comparison with those of Roman or subsequent harbors.

¹⁵⁴ Tafrali, *Thessalonique*, 14–18.

¹⁵⁵ Bryer and Winfield, *Pontos*, 88, 92, 195.

¹⁵⁶ Foss, *Ephesus*, 185–87.

¹⁵⁷ Müller-Wiener, "Die Stadtfestigungen von Izmir," 59–104.

¹⁵⁸ Foss, "Strobilos," 148.

¹⁵⁹ Kalligas, *Byzantine Monemvasia*, 53.

Chrysoupolis-Kavala,¹⁶⁰ Attaleia,¹⁶¹ Herakleia Pontike,¹⁶² among others. Since Byzantine ships were not large, the harbors, too, tended to be small, and so it was easy to find locations along the coast where natural protection was available.¹⁶³ The facilities of a Byzantine harbor would include a customhouse,¹⁶⁴ a fountain for drinking water, and wooden jetties (σκάλαι), of which we know there were many along the Golden Horn,¹⁶⁵ at which ships might discharge their cargo. For reasons of security, the harbor and the acropolis ought ideally to have had a direct connection, as in the cases of Kherson¹⁶⁶ and Sinope,¹⁶⁷ but this was rarely possible. I have already discussed the case of Thessalonike.

The area in which commercial activities were located continued to be called the agora down to the end of the Byzantine Empire.¹⁶⁸ It is certain that the concept of the agora as the meeting place of the citizens, as it had been in the cities of antiquity, had long since died away, and the enclosed *forum* of the Roman and early Christian urban centers had also disappeared. Yet the area where trade was done must have continued to be a place for social intercourse—and a pleasant one, at that, to judge from a comment by Eustathios of Thessalonike,¹⁶⁹ who reprimands certain monks for spending more time in the marketplace than in church. Where the marketplace of the post-iconoclastic Byzantine city is concerned, the written texts help us understand that a distinction has to be made between the complexes of permanent shops that formed part of the urban fabric, the temporary stalls set up on open ground for commercial transactions, and fairs.

The permanent market of the Byzantine city seems to have been along the lines of that of Constantinople, that is, it was arranged along either side of a main street that was also called the *foros*.¹⁷⁰ Archaeological evidence to prove this is scanty in the extreme, as are references in the texts. In Thessalonike,¹⁷¹ we are told that the market-

¹⁶⁰ AD 33.2 (1978): 322–23; AD 41.2 (1986): 175.

¹⁶¹ Vryonis, *Decline*, 13, 14 and nn. 62–68.

¹⁶² W. Hoepfner, *Herakleia Pontike-Erëgli: Eine Baugeschichtliche Untersuchung* (Vienna, 1966), 35, 40, 47.

¹⁶³ The relative ease with which safe anchorages could be found in uninhabited places, especially in the Aegean, fostered the growth of piracy. Michael Choniates gives an eloquent account of events on Aegina and Makronisos (Lambros, *Μιχαὴλ Ἀκομινάτου*, 2:238, 239, 565, 566). It is also worth noting that even fortified harbors such as Strobilos and Naupaktos came into the hands of pirates for a while. For the size and capacity of the ships, see G. Makris, “Ships,” *EHB* 94–97.

¹⁶⁴ No archaeological traces of a customs building are known.

¹⁶⁵ W. Müller-Wiener, *Bildlexikon zur Topographie Istanbul* (Tübingen, 1977), 58–63.

¹⁶⁶ Bortoli and Kazanski, “Kherson,” 659.

¹⁶⁷ Bryer and Winfield, *Pontos*, 88, fig. 4.

¹⁶⁸ See M. Johnson, “Agora,” *ODB* 38.

¹⁶⁹ *Opuscula* 223, 38–40, according to A. Laiou, “Market,” *ODB* 1301.

¹⁷⁰ In other words, it kept a name derived from the Roman “forum.” For the replacement of the agora by streets with arcades, see C. Mango, *Byzantine Architecture* (New York, 1976), 57; for temporary and permanent markets, see A. E. Laiou, “Exchange and Trade, Seventh–Twelfth Centuries,” *EHB* 709–10, 730–32, 754–56, and K.-P. Matschke, “Commerce, Trade, Markets, and Money, Thirteenth–Fifteenth Centuries,” *EHB* 779–82.

¹⁷¹ Tafrali, *Thessalonique*, 126 nn. 3–4, and 147 n. 2.

place was located near the Kassandreiotike Gate, on the southeastern side of the city, but it seems very likely that there would also have been a commercial area on the southwestern side, by the harbor. In Rhodes, the central thoroughfare (*mese*) of the Byzantine city was the ancient *decumanus* street, and one of the city gates, with an open space for commercial purposes,¹⁷² was located at its intersection with the *cardo*. In Corinth, a row of shops with a light arcade on its facade has been identified,¹⁷³ but there is some question as to the relation it bore to the center of the Byzantine city.¹⁷⁴ Views have been put forward¹⁷⁵ about the location of the permanent marketplace of Athens, while in Pergamon it seems clear that the main street of the section of the city that has been excavated came to be lined with small shops.¹⁷⁶ The “Byzantine shops” of Sardis,¹⁷⁷ on the other hand, survived no later than the seventh century. The most complete picture of a line of shops is that provided by Preslav,¹⁷⁸ whose commercial center has been systematically excavated. Unfortunately, we have no information at all about the commercial or other uses of the main streets of the other cities.¹⁷⁹

Temporary markets in open spaces have, of course, left no traces, and we can only hypothesize about where they must have been located and what they must have looked like, as in the cases of the cities of Asia Minor¹⁸⁰ and the Peloponnese. We have more specific information about open spaces in Lakedaimon,¹⁸¹ Ephesos,¹⁸² and Rhodes.¹⁸³ It is questionable whether the superb plaza in front of the palaces at Mistra¹⁸⁴ was intended for commercial purposes, and the model for it ought probably to be sought in the corresponding *piazas* of medieval Italian cities. It is interesting to note, however, that immediately after the Ottoman conquest these few free spaces in cities such as Mistra, or others that took shape under foreign suzerainty, were covered over with houses.¹⁸⁵

¹⁷² Recent discoveries by the director of antiquities, E. Kollias, and his associates.

¹⁷³ R. Scranton, *Mediaeval Architecture in the Central Area of Corinth*, Corinth 16 (Princeton, N.J., 1957), 58–60, 77–78, 124–25, drawing VI.

¹⁷⁴ Sanders, “Corinth,” 650, 652. The lower city of Corinth, as distinct from the castle of the Acrocorinth, is described by Niketas Choniates as “the commercial district” (ἐμπορίον): *Nicetae Choniatae Historia*, ed. I. Bekker (Bonn, 1835), 100 (75, 56–57). The same distinction between the city and the fortified castle is to be seen at a later date in the *Chronicle of the Morea* (ed. P. Kalonaros [Athens, 1967], p. 196, lines 4665, 4666) in the case of Veligoste.

¹⁷⁵ H. Thompson and R. Wycherley, *The Agora of Athens* (Princeton, N.J., 1972), 216 n. 28.

¹⁷⁶ Rheidt, “Pergamon,” 626–27.

¹⁷⁷ J. S. Crawford, *The Byzantine Shops at Sardis* (Cambridge, Mass., 1990).

¹⁷⁸ Jordanov, “Preslav,” 668. On the southwestern side is a large square for commercial purposes, along the wall, and a line of eighteen shops, all of the same size, close to the gate leading to the road to Constantinople.

¹⁷⁹ The *foros* gate has been found at Serres, but there are no traces of shops. See AA 33.2 (1978): 315–16.

¹⁸⁰ Vryonis, *Decline*, 10–20.

¹⁸¹ Bon, *Péloponnèse*, 132–33.

¹⁸² Foss, *Ephesus*, 113.

¹⁸³ Kollias, “Τοπογραφικά προβλήματα,” 81–108.

¹⁸⁴ Orlandos, “Μυστράς,” 10–11.

¹⁸⁵ As in the cases of Chios (P. Argenti, *Hieronimo Giustiniani's History of Chios* [Cambridge, 1943], 65ff), Rhodes, and Mistra (Orlandos, “Μυστράς,” 10 n. 2).

It seems to have been easier to find free space for temporary commercial activities outside the walls. Kekaumenos describes the bazaar held by pirates outside the gates of Demetrias,¹⁸⁶ and there is good reason to believe that there were commercial uses in spaces outside the walls of Adrianople, Rhodes,¹⁸⁷ and other cities. Psellos provides us with the interesting piece of information that in 1042 a whole town consisting of huts for commercial purposes sprang up for a short period in the sparsely inhabited part of Constantinople between the walls of Constantine and Theodosios.¹⁸⁸

In urban terms, the fairs that established themselves in certain towns across the empire, which were associated with the feast day of a saint,¹⁸⁹ and which were open to merchants from far away, even beyond the frontiers of the state, were of a similar form. Here, too, no material traces have survived; all our information is from the written sources. I have already mentioned Timarion's description of the fair of St. Demetrios in Thessalonike. In Asia Minor there were important fairs at Ephesos,¹⁹⁰ Chonai,¹⁹¹ and Trebizond.¹⁹² We also know of fairs in the Peloponnese,¹⁹³ though the Life of Hosios Nikon tells us that the fair of Lakedaimon took place within the city walls.¹⁹⁴

The "court" (αὐλή) was most probably an unroofed space, secured by gates, around which were located shops, workshops, and houses. It formed a distinct unit of property. We know of such courts in Thessalonike,¹⁹⁵ Peritheorion,¹⁹⁶ and elsewhere. With reservations, one might identify specific architectural remains in Athens¹⁹⁷ and Thebes¹⁹⁸ as courts surrounded by shops, but it would be hard, especially in view of their size, to connect them with the roofed markets typical of the commercial centers of Arab cities during the same period.

Another point of interest is the presence, known to us from written sources, of street traders in Byzantine cities.¹⁹⁹ The depiction of the cult of the Virgin of the Blachernai in the *katholikon* of the Blachernae monastery at Arta is of interest from a number of

¹⁸⁶ Kekaumenos, chap. 33.

¹⁸⁷ Kollias, "Τοπογραφικά προβλήματα."

¹⁸⁸ Michel Psellos, *Chronographie*, ed. E. Renauld, 2 vols. (Paris, 1967), 1:127.

¹⁸⁹ Sp. Vryonis, "The Panegyris of the Byzantine Saint," in *The Byzantine Saint* (London, 1981), 196–227; A. E. Laiou, "Händler und Kaufleute auf dem Jahrmarkt," in *Fest und Alltag in Byzanz*, ed. G. Prinzing and D. Simon (Munich, 1990), 53–70.

¹⁹⁰ Vryonis, *Decline*, 10, and Foss, *Ephesus*, 110–11, 126.

¹⁹¹ In honor of the archangel Michael: see Vryonis, *Decline*, 20 n. 112.

¹⁹² *Ibid.*, 40 n. 197.

¹⁹³ A. I. Lambropoulou, "Οἱ ἐμποροπανηγύρεις στὴν Πελοπόννησο κατὰ τὴν Μεσαιωνικὴ ἐποχὴ," in *Ἡ καθημερινὴ ζωὴ στὸ Βυζάντιο*, ed. Angelidi (as above, note 130), 291–310.

¹⁹⁴ *Ibid.*, 294–95.

¹⁹⁵ M. L. Rautmann, "Observations on the Byzantine Palaces of Thessaloniki," *Byzantion* 60 (1990): 301, 302, 305, describing the building of 1415.

¹⁹⁶ P. Lemerle, "Le typikon de Grégoire Pakourianos (Décembre 1083)," in *Cinq études sur le XIe siècle byzantin* (Paris, 1977), 135.

¹⁹⁷ T. L. Shear, "The Campaign of 1933," *Hesperia* 4 (1935): 311ff.

¹⁹⁸ *ΑΔ* 23.2 (1968): 214–16, drawing 8; the courtyard measured 9.5 × 8 m.

¹⁹⁹ Examples were assembled by Ph. Koukoules, *Βυζαντινὴν Βίος καὶ Πολιτισμός*, 6 vols. in 7 pts. (Athens, 1948–57), 2.1:240–41.

points of view, but it also contains five market scenes²⁰⁰ showing street traders. The sale of slaves took place under specific conditions²⁰¹ in the provincial cities of Byzantium; in Constantinople, the slave market was located in a specific place, about which we have a certain amount of information.²⁰²

In the cities of Byzantium, the workshops of craftsmen²⁰³ differed little from ordinary shops; the two types of establishment often coexisted, and uses could switch easily, given that the systems of production were simple. It is generally accepted that technological progress in Byzantium was slow;²⁰⁴ it was not until a very late date, shortly before the fall of Constantinople, that the potential of technology was appreciated.²⁰⁵ Sources of energy that could be used to power machinery were usually located outside cities,²⁰⁶ and the distribution of labor was little better than rudimentary. As a result, the level of manufacturing production in Byzantium was low, only a few cities manufactured goods that could be exported, and European goods rapidly dominated the market in the late Byzantine period.

The archaeological traces of manufacturing activities in the provincial cities of Byzantium are, unfortunately, few and hard to discern. Although it is difficult to confirm this from the finds, it would appear that the practice of having workshops on the ground floor and residential quarters on the upper story, or of workshops between houses, known to us from medieval Europe, was also common in Byzantium.²⁰⁷

Garments for everyday wear were certainly woven or knitted at home. We have a good deal of information about the production of expensive silk cloth for export;²⁰⁸ this was made in Nicaea,²⁰⁹ Corinth, Andros,²¹⁰ and, above all, Thebes. Indeed, in the mid-twelfth century it would appear that the production of Thebes outstripped that of Constantinople itself,²¹¹ and it is the only city where archaeological evidence has

²⁰⁰ M. Acheimastou-Potamianou, "Byzantine Wall Paintings of Vlacherna Monastery," in *Actes du XV^e Congrès International des études byzantines* (Athens, 1981), 2.1:12–14.

²⁰¹ Kekaumenos, 125.

²⁰² A. Xyngopoulos, "Περὶ μίαν μικρογραφίαν τοῦ κώδικος Laurentianus VI, 23," in *Χαριστήριον εἰς Ἀ. Κ. Ὁρλάνδον* (as above, note 85), 1:233–39, pl. 1.

²⁰³ For the term "workshop" (ἐργαστήριον) and distinctions among them in the *Book of the Eparch*, see A. Kazhdan, "Ergasterion," *ODB*, 726.

²⁰⁴ Kazhdan and Epstein, *Change*, 50.

²⁰⁵ Sp. Lambros, "Υπόμνημα τοῦ καρδινάλιου Βησσαρίωνος," *Νέος Ἑλλ.* 3 (1906): 25, 26; A. G. Keller, "A Byzantine Admirer of Western Progress, Cardinal Bessarion," *Cambridge Historical Journal* 2 (1953–55): 31–37.

²⁰⁶ For water mills and windmills, see below.

²⁰⁷ Scranton, *Mediaeval Architecture*, 74–76; C. Bouras, "Κατοικίες καὶ οἰκισμοὶ στὴν Βυζαντινὴ Ἑλλάδα," in *Οἰκισμοὶ στὴν Ἑλλάδα*, ed. O. Doumanis (Athens, 1974), 46 n. 157; see also Dochev, "Tŭrnovo," 677. In the residential area, metalworking shops and potteries of the 12th century have come to light.

²⁰⁸ See D. Jacoby, "Silk in Western Byzantium before the Fourth Crusade," *BZ* 84/85 (1991–92): 452–500. Cf. G. Dagron, "The Urban Economy, Seventh–Twelfth Centuries," *EHB* 438–44.

²⁰⁹ Vryonis, *Decline*, 12 n. 49.

²¹⁰ A. K. Orlandos, "Βυζαντινὰ μνημεῖα τῆς Ἀνδρου," *Αρχ.Βυζ.Μνημ.* Ἑλλ. 8 (1955–56): 6 nn. 2–4.

²¹¹ Jacoby, "Silk," 497.

survived to confirm the written sources.²¹² Information about the production, three centuries earlier, of luxury cloth in Patras²¹³ has not been verified by archaeology. Indeed, the whole of the Danielis story, from which the information comes, has been called into question.²¹⁴

The process of dyeing expensive silk cloth was closely connected with the weaving of it, and here again the Byzantine ruins of Thebes are most instructive. Dyeing required abundant supplies of water²¹⁵ and also the procurement of purple dye (*porphyra*), which fishermen obtained from the sea off Ermione,²¹⁶ the islet of Gyaros, and the coast of Attica.²¹⁷

As we have already seen, pottery is the manufacturing activity of most relevance for archaeology. Expensive or everyday items of pottery were used everywhere, being bought, sold, or given as gifts. A close study of them reveals that pottery was made in a large number of cities. The pottery workshops whose ruins have been identified amount to only a small proportion of those that once existed and that are defined as “local” solely on the basis of the shapes and techniques of their products. Active pottery workshops have thus been identified in Thessalonike,²¹⁸ Larissa,²¹⁹ Tŭrnovo,²²⁰ Serres, settlements in western Thrace,²²¹ Athens,²²² Pergamon,²²³ Thebes,²²⁴ and Corinth.²²⁵ Pottery workshops, usually with kilns, have been identified during excavations in

²¹² Louvi-Kizi, “Thebes,” 636–38. C. Koilakou, “Βυζαντινὰ ἐργαστήρια (βαφῆς) στὴν Θήβα,” *Τεχνολογία* 3 (1989): 23–24.

²¹³ In *Theophanes Continuatus*, ed. I. Bekker (Bonn, 1838), 226–28, 316–21; and Skylitzes: *Ioannis Scylitzae, Synopsis historiarum*, ed. I. Thurn (Berlin, 1973), 121–23, 160–61.

²¹⁴ I. Anagnostakis, “Τὸ ἐπεισόδιο τῆς Δανιηλίδας. Πληροφορίες καθημερινοῦ βίου ἢ μυθοπλαστικὰ στοιχεῖα,” in *Ἡ καθημερινὴ ζωὴ στὸ Βυζάντιο*, ed. Angelidi (as above, note 130), 375–90.

²¹⁵ See *AD* 41.2 (1986): 27, and the conclusions reached by Louvi-Kizi, “Thebes,” 634, as to the water supply for the workshops of Thebes from the aqueduct of Ioannes Kaloktenes.

²¹⁶ Lambros, *Μιχαὴλ Ἀκομινάτου*, 2:275 and 635.

²¹⁷ According to the *praktikon*, the area between the Acropolis and Philopappos hill was occupied by the neighborhood of the κογχυλάριοι, who are believed to have been dyers or fishermen of porphyra. See Grandstrem, Medvedev, and Papachryssanthou, “Fragment d’un *praktikon*,” 25, 26, 35. See also Kazanaki-Lappa, “Medieval Athens,” 644–45.

²¹⁸ D. Papanikola-Bakirtzi, “Ἐργαστήριο ἐφυσλωμένης κεραμεικῆς στὴ Θεσσαλονίκη,” in *Ἀφιέρωμα στὴ μνήμη Στ. Πελεκανίδη* (Thessalonike, 1983), 377–88; C. Bakirtzis and D. Papanikola-Bakirtzis, “De la céramique byzantine en glaçure à Thessalonique,” *BBulg* 7 (1981): 421–36; cf. V. François and J.-M. Spieser, “Pottery and Glass,” *EHB* 604.

²¹⁹ G. Gourgiotis, “Τὰ Θεσσαλικά μεσοβυζαντινὰ κεραμουργεῖα,” *Ἀρχαιολογία* 54 (1995): 47–50.

²²⁰ *Ibid.*

²²¹ Bakirtzis, “Western Thrace,” 48. There was a glazed pottery workshop in the settlement of Gratianon.

²²² Kazanaki-Lappa, “Medieval Athens,” 644.

²²³ A. H. S. Megaw, “Zeuxippus Ware,” *BSA* 63 (1968): 82.

²²⁴ P. Armstrong, “Byzantine Thebes: Excavation on the Kadmeia, 1980,” *BSA* 88 (1993): 295–335. It seems likely that these vessels were made in a local workshop, though others imported from Constantinople have been found.

²²⁵ Sanders, “Corinth,” 651–52. Evidence has been discovered of striking development in the manufacturing of pottery during the last decade of the 11th century. See also Scranton, *Mediaeval Architecture*, 47–49, 56, 59, 61, 67–68.

Arta,²²⁶ Thessalonike,²²⁷ Didymoteichon,²²⁸ Corinth,²²⁹ Sardis,²³⁰ and Pydna.²³¹ Unfortunately, almost none of these instances of specific pottery workshops have been studied in a systematic and detailed manner capable of producing conclusions about the number of staff employed, the volume of production, the position of the workshops in the city, the date at which they operated, and other facts.

The question of the capacity of the large vessels that were in everyday use is beginning to receive attention in connection with the marketing of products²³² and is obviously of great interest for economic history. However, its only place in this examination of the Byzantine city is in relation to the storage spaces in houses, discussed below.

Quite a number of glass objects, mostly vessels, have been found in middle Byzantine cities,²³³ but very few workshops with the special kilns required for glass have been discovered,²³⁴ perhaps because Constantinople manufactured enough of these items to meet the needs of the empire. As long as fifty years ago,²³⁵ two glass workshops were excavated and studied in Corinth; they operated in the eleventh and twelfth centuries, but more recent research has shown that many of the glass objects found in Corinth were imported.²³⁶ A kiln for glass has come to light at Tŭrnovo,²³⁷ near the gate on the road to Constantinople, and at Sardis²³⁸ there was a small workshop making glassware during the late Byzantine period. The question of the manufacturing of large quantities of glass for major architectural projects in the provinces has not yet been studied.²³⁹

It is generally accepted that proper metalworking—the production and casting of

²²⁶ AA 41.2 (1986): 107. Two large pottery kilns outside the walls (?).

²²⁷ AA 33.2 (1978): 239.

²²⁸ AA 32.2 (1977): 284–85.

²²⁹ Sanders, "Corinth," 652; the pottery kiln beneath the church of St. John.

²³⁰ Foss and Scott, "Sardis," 620. Pottery reappears during the 12th century, with the production of imitation deluxe ware. J. A. Scott and D. C. Kamilli, "Late Byzantine Glazed Pottery from Sardis," in *Actes du XVe Congrès International des études byzantines* (as above, note 200), 2:649–96.

²³¹ I. Marki, "Ανασκαφή ἐργαστηρίου κεραμεικῆς καὶ χύτευσης σιδήρου στὴν ἀρχαία Πύδνα," in Ἀντίφωνον, Ἀφιέρωμα στὸν καθηγητὴ Ν.Β. Δρανδάκη, ed. B. Katsaros (Thessalonike, 1994), 123.

²³² Of amphoras in particular. See P. Arthur, "Aspects of Byzantine Economy: An Evaluation of Amphora Evidence from Italy," in *Recherches sur la céramique byzantine*, ed. Déroche and Spieser (as above, note 108), 79–93; Ch. Bakirtzis, "Byzantine Amphorae," *ibid.*, 73–77; Ch. Bakirtzis, *Βυζαντινὰ τσουκαλογάγνηνα* (Athens, 1989), 72–74, 115–20, 126–27.

²³³ As in Pergamon (Rheidt, "Pergamon," 627) and Tŭrnovo (Dochev, "Tŭrnovo," 677).

²³⁴ Kazhdan and Epstein, *Change*, 42; G. Davidson, "The Importance of Greece in Byzantine Glass Manufacture," in *Actes du XVe Congrès International des études byzantines* (as above, note 200), 2.2:915–18.

²³⁵ G. R. Davidson, "A Medieval Glass Factory in Corinth," *AJA* 44 (1940): 297–324, and F. Matson, "Technological Study of Glass from the Corinth Factory," *AJA* 44 (1940): 325–27.

²³⁶ Sanders, "Corinth," 652–53, and AA 32.2 (1977): 53, 54.

²³⁷ Dochev, "Tŭrnovo," 677.

²³⁸ Foss and Scott, "Sardis," 621.

²³⁹ During the 1960s, remnants of a small kiln with an accumulation of glass paste were found close to the monastery of Hosios Loukas. In the 10th and 11th centuries, scores of glass disks were placed at the windows of the churches in the monastery, together with glass paste tesserae on the large surfaces of the domes and walls. The find has never been published.

large quantities of rough metal—was confined exclusively to Constantinople.²⁴⁰ However, smaller workshops where metal was processed and manufactured (that is, the establishments of blacksmiths and coppersmiths) have been found in excavations of a number of sites: Corinth,²⁴¹ Pergamon,²⁴² Kherson,²⁴³ and Thessalonike, where the sources refer to a whole “Arcade of the Coppersmiths.”²⁴⁴ As examples of cities where metal-casting workshops have been discovered, one could cite Pydna²⁴⁵—Byzantine Kitros—and Tŭrnovo,²⁴⁶ where, indeed, iron, copper, and lead ores seem to have been converted.

Archaeological excavations have produced even less information about another branch of metalworking in which Constantinople seems to have had a near-monopoly: the working of gold. Some traces of goldsmiths’ shops have come to light in Corinth,²⁴⁷ and molds for gold jewelry have been found in Tŭrnovo.²⁴⁸ Here we need to note that the provisions of Julian of Askalon banned the setting up of glass and metal workshops within the urban fabric.²⁴⁹ This special problem has never been studied, but the general picture to be derived from the archaeological finds is that the provisions in question were not applied in the provincial cities during the period under examination.

Excavations have revealed various other buildings in which productive activities were carried out, but there are always doubts as to whether these were self-contained workshops or the ground floors of houses fitted with installations of some kind. Nor is it often clear what kind of goods were produced.²⁵⁰ In Athens there are complexes of buildings on the sites of the temple of Olympian Zeus²⁵¹ and the Dipylon Gate,²⁵² outside the city walls, which had abundant supplies of water and are believed to have been soap factories²⁵³ or tanneries. A system for distillation has been found in a workshop

²⁴⁰ Kazhdan and Epstein, *Change*, 43; M. Mundell-Mango and L. Bouras, “Metalwork,” *ODB* 1351. Cf. M. K. Papathanassiou, “Metallurgy and Metalworking Techniques,” *EHB*.

²⁴¹ Sanders, “Corinth,” 653; *AD* 32.2 (1977): 53–54.

²⁴² Rheidt, “Pergamon,” 627.

²⁴³ Bortoli and Kazanski, “Kherson,” 661, 663; small-scale utilitarian objects and molds for buckles, of an earlier period.

²⁴⁴ Tafrali, *Thessalonique*, 126 n. 2. “Χαλκευτική Στοά,” not to be confused with the name of the church of the Virgin of the Coppersmiths (Παναγία τῶν Χαλκέων), which is a much later name. See also S. Kissas, “Ἡ μεσαιωνική Θεσσαλονίκη ὡς κέντρο μεταλλοτεχνίας,” in *Ε’ Συμπόσιο ΧΑΕ: Πρόγραμμα καὶ περιλήψεις ἀνακοινώσεων* (Athens, 1985), 32–33.

²⁴⁵ Marki, “Ἀνασκαφὴ ἐργαστηρίου,” 126–27. In notes 19 and 20, see the bibliography for other metal crucibles, of dubious chronology.

²⁴⁶ Dochev, “Tŭrnovo,” 675–76.

²⁴⁷ *AD* 32.2 (1977): 53–54.

²⁴⁸ Dochev, “Tŭrnovo,” 676.

²⁴⁹ *Hexabiblos*, 117–18. They could be located either outside the city or “in deserted and suitable places in the city” (εἰς τοὺς ἀποκησμένους καὶ ἰδιάζοντας τῶν πόλεων τόπους).

²⁵⁰ As in the case of the σύγκολλα χανοῦτια, which we are told were made in Messina. See Guilou, *S. Maria di Messina*, 111.

²⁵¹ I. Threpsiadis and I. Travlos, “Ἀνασκαφικὰ ἔρευνα παρὰ τὸ Ὀλυμπεῖον,” *Πρακτικὰ τῆς ἐν Ἀθήναις Ἀρχαιολογικῆς Ἑταιρείας* (1949): 25–43; *AD* 17.2 (1961): 9–14.

²⁵² W. Hoepfner, *Das Pompeion und seine Nachfolgerbauten* (Berlin, 1976), 192–95.

²⁵³ Kazanaki-Lappa, “Medieval Athens,” 644.

in Sardis,²⁵⁴ and Kherson has yielded special tanks for the salting of fish,²⁵⁵ which the city exported. Facilities for the processing of agricultural produce were much more common: these included olive presses²⁵⁶ and wineries, to which there are sometimes references in reports of excavations. Mills, which as already noted are connected with the technology of the period and with the utilization of natural energy sources, belong to the same category of installation.

“Animal-powered mill workshops”²⁵⁷ were thus the most common in the cities themselves. Water mills, invented in antiquity, were usually confined to rural areas, where there were abundant streams, and the documents of Athonite monasteries refer to scores of them as assets of those foundations. The very well known water mill in the Agora of Athens²⁵⁸ was also outside the city walls when it began to operate. Windmills, known in Byzantium at least as far back as the twelfth century,²⁵⁹ might be located in cities—as in the case of Rhodes, where they stood on the quay at the harbor²⁶⁰—but our information about them is limited. There is no mention in Byzantine times of the use of wind- or waterpower for purposes other than grinding grain or pressing olives.²⁶¹

Despite the nuisance created by tanneries, they were not covered by the prohibitions of Julian and the *Hexabiblos*; however, it seems likely that the tanneries of Athens²⁶² and Thebes²⁶³ were located outside the cities. In Constantinople,²⁶⁴ too, they were outside the walls, but in Thessalonike (though admittedly at a later date) they were in the city.²⁶⁵ Also excluded from the city were various manufacturing activities connected with building materials²⁶⁶ and the slaughterhouses.²⁶⁷ Shipyards, which were clearly of

²⁵⁴ Foss and Scott, “Sardis.”

²⁵⁵ Bortoli and Kazanski, “Kherson,” 660.

²⁵⁶ As in the case of Lakedaimon: *AD* 34.2 (1979): 157–59, drawing 1.

²⁵⁷ P. Gautier, “Le *typon* du sébaste Grégoire Pakourianos,” *REB* 42 (1984): 43.

²⁵⁸ A. W. Parsons, “A Roman Watermill in the Athenian Agora,” *Hesperia* 5 (1936): 70–90; A. Frantz, *Late Antiquity, The Athenian Agora* 24 (Princeton, N.J., 1988), 80–83 n. 163. The monument dates from the 5th century.

²⁵⁹ T. G. Koukoulis, “A Late Byzantine Windmill at Kythera,” in *Φιλολόγων: Lakonian Studies in Honour of Hector Catling*, ed. J. M. Sanders (London, 1992), 155–63; G. Dimitrokallis, “Οἱ ἀνεμόμυλοι τῶν Βυζαντινῶν,” *Παρνασσός* 20 (1978): 141–44.

²⁶⁰ Of the 14th century.

²⁶¹ See C. M. Cipolla, *Before the Industrial Revolution: European Society and Economy, 1000–1700*, 3d ed. (New York, 1994), 140–44. In France, water mills had been used for other productive purposes even in the early 11th century.

²⁶² Threpsiadis and Travlos, Ἀνασκαφικαὶ ἔρευναι. Kazanaki-Lappa, “Medieval Athens,” 644.

²⁶³ Louvi-Kizi, “Thebes,” 638.

²⁶⁴ At Vlanga, a small harbor outside the sea walls. See D. Jacoby, “Les quartiers juifs de Constantinople,” *Byzantion* 37 (1967): 167–227; Maximos Planoudes protests that an abandoned monastery has been taken over by Jewish tanners. See S. Bowman and A. Cutler, “Anti-Semitism,” *ODB* 123.

²⁶⁵ Tafrali, *Thessalonique*, 16.

²⁶⁶ As in the valley of the Keteios near Pergamon (Rheidt, “Pergamon,” 627), at Preslav (Jordanov, “Preslav,” 668), and at Tŭrnovo (Dochev, “Tŭrnovo,” 675). See also K. Theocharidou, “Συμβολὴ στὴν μελέτη τῆς παραγωγῆς κεραμικῶν προϊόντων στὰ βυζαντινὰ καὶ μεταβυζαντινὰ χρόνια,” *Δελτ. Χριστ. Ἀρχ. Ἑτ.* (1985–86): 97–112.

²⁶⁷ The will of the monk Nikon the “Metanoeite”: see S. Lambros, “Ὁ βίος Νίκωνος τοῦ Μετανοεῖτε,” *Νέος Ἑλλ.* 3 (1906): 224.

great importance for the Byzantine economy and were located in the cities or close to them,²⁶⁸ have left no material traces.

Cultivated land inside cities is of interest to us here not as a component in production,²⁶⁹ but as proof of the decline in the value of land when it was used less intensively for other purposes. With the exception of a city in Armenia mentioned by Kekaumenos,²⁷⁰ the presence of fields inside the walls was usually taken by the Byzantines as evidence that the city was in advanced decline. The best-known example is that of Athens,²⁷¹ where, however, the walled area should be regarded as that enclosed by the ancient walls of Themistocles rather than the circuit of Byzantine times.²⁷² It was this picture of decline that foreign visitors wished to emphasize in their descriptions of Constantinople²⁷³ and Corinth²⁷⁴ during the late Byzantine period. Thessalonike, as we have seen, had extensive open spaces because of the distance between its harbor and the acropolis;²⁷⁵ in other words, once more for defensive purposes. As for the natural environment of the middle Byzantine urban landscape,²⁷⁶ it would be an error to attempt any generalization whatsoever. Of the monasteries within the cities, very few, such as the Stoudios monastery in Constantinople,²⁷⁷ could be regarded as productive in the sense that they turned out more goods than were essential for their own needs.

To return to the question of the ancient buildings within the middle Byzantine cities that had survived from earlier periods, the recycling of marble, disastrous as it may have been for art, may be regarded as a process of production. The lime-kilns closest to ancient temples, such as those of Sardis²⁷⁸ or in the temple of Olympian Zeus in Athens,²⁷⁹ did not suspend operations until the nineteenth century, and it was common

²⁶⁸ H. Antoniadis-Bibikou, *Etudes d'histoire maritime de Byzance* (Paris, 1966), passim; Vryonis, *Decline*, 16 n. 90; Bryer and Winfield, *Pontos*, 195; T. Gregory, "Rhodes," *ODB*, 1792; Kalligas, *Byzantine Monemvasia*, 53–54. The shipyards of Monemvasia were at the harbor of Ierax, 14 km to the north (*ibid.*, 54 nn. 58, 59).

²⁶⁹ J. Koder, "Fresh Vegetables for the Capital," in *Constantinople and Its Hinterland*, ed. C. Mango and G. Dagron (Aldershot, 1995), 51–53.

²⁷⁰ Kekaumenos, 168.

²⁷¹ Known to us from the passage in Michael Choniates; see Lambros, *Μιχαὴλ Ἀκομινάτου*, 1:159–60; Kazanaki-Lappa, "Medieval Athens," 645; Kazhdan and Epstein, *Change*, 48.

²⁷² This can be concluded from the entries in the *praktikon*; see Grandstrem, Medvedev, and Pachyryssanthou, "Fragment d'un praktikon," passim.

²⁷³ As witnessed by Odo of Deuil (PL 185:1221), Clavijo (in 1403: *Narrative of the Embassy of Ruy Gonzalez de Clavijo*, ed. C. Markham [London, 1859; repr. New York, 1970] 68, 69, 76, 79), and Pachymeres (*Georgii Pachymeris De Michaele et Andronico Palaeologis libri XIII*, ed. I. Bekker [Bonn, 1835], 1:164).

²⁷⁴ As witnessed by Nicolo de Martoni in the late 14th century; see D. Zakythinos, *Le despotat grec de Morée*, 2 vols. (Athens, 1953), 2:175.

²⁷⁵ Tafrafi, *Thessalonique*, 143; Vavyloupoulou-Charitonidou, "Céramique d'offrande," 209 n. 1.

²⁷⁶ See Bouras, "City and Village," 650; A. Avramea, "Φυσικὸ περιβάλλον καὶ ἀνθρώπινη παρουσία: Ἀντιλήψεις καὶ εἰκόνες ἀπὸ τὸ ἀστικὸ τοπίο," in *Ἡ καθημερινὴ ζωὴ στὸ Βυζάντιο*, ed. Angelidi (as above, note 130), 687–94.

²⁷⁷ Where there were scriptoria in which codices were copied and monk-craftsmen.

²⁷⁸ Foss and Scott, "Sardis," 619.

²⁷⁹ J. Travlos, *Pictorial Dictionary of Ancient Athens* (London, 1971), 403.

for marble architectural members to be made from ancient materials. In Athens, indeed, the countless middle Byzantine architectural members found in ornamental use make it almost certain that they did not originate in churches but came from the yards of marble sculptors whose activities were encouraged by the abundance of the raw material and who sold prefabricated marble sections on a large scale.

Building activity in the middle Byzantine city differed from that of the European cities of the same period in another respect: it did not include the construction of cathedrals. In the medieval western cities of the eleventh, twelfth, and thirteenth centuries, the erection of a cathedral involved a huge capital investment and the labor of hundreds of skilled and unskilled workers.²⁸⁰ In Byzantium, building was on a much smaller scale and consisted largely of the construction, at the expense of the state, of fortifications to defend the city.

Few Byzantine houses dating from the period between the eighth and the fifteenth century can be studied in the provincial cities of the empire; the majority of those accessible are ruined, small,²⁸¹ and built of cheap materials.²⁸² In the context of economic history, I examine here the archaeological and other evidence relevant to production and consumption in the houses of the Byzantine city. The fact that we have only the ground floors of the houses limits our scope for study of the productive areas in the rooms that could be lived in. It is clear that everyday clothing and items that were the result of the processing of agricultural produce were made privately, in the home. The view has also been put forward that workshops—combined with houses—were rented by craftsmen from large landowners in order to increase production, especially of silk.²⁸³ Cases of mills on the ground floors of houses have come to light in Pergamon,²⁸⁴ and they existed in Constantinople, as we can see from the *Diataxis* of Michael Attaleiates.²⁸⁵

²⁸⁰ X. Barral i Altet, *L'art médiéval* (Paris, 1991), 23.

²⁸¹ See the observations of Foss and Scott, "Sardis," 618, and the size of the houses of Geraki in Δελτ.Χρυστ.Ἀρχ.Ἔτ. 15 (1989–90): 66–88. Further confirmation of the small size of the houses comes from N. Oikonomides' argument that there was no movable furniture in them; see N. Oikonomides, "The Contents of the Byzantine House from the Eleventh to the Fifteenth Century," *DOP* 44 (1990): 206–14. At Geraki (as above, 81), the beam sockets in the upper-story rooms are evidence of the presence of a fixed wooden *kravata*.

²⁸² For typological and other observations on the houses of middle Byzantium, see Bouras, "Houses in Byzantium," Δελτ.Χρυστ.Ἀρχ.Ἔτ. 11 (1982–83): 1–26; for a general bibliography, see nn. 2–11. See also S. Eyice, "Quelques observations sur l'habitat byzantin en Turquie," *Anadolu Araştırmaları* 10 (1986): 513–30; D. Papachryssanthou, "Maisons modestes à Thessalonique au XIV s.," in Ἀμνητὸς στὴ μνήμη Φ. Ἀποστολοπούλου (Athens, 1984), 254–67; P. Lemerle, "La *Diataxis* de Constantin Attaliatès (mars 1077)," in *Cinq études* (as above, note 196), 77–80, and M. Živojinović, "The Houses of the Hilandar Monastery in Thessalonike during the Fourteenth Century," in *TO EΛΛΗΝΙΚΟΝ*, ed. Langdon et al. (New York, 1993), 1:465–74.

²⁸³ Jacoby, "Silk," 479.

²⁸⁴ W. Radt, "Die byzantinische Wohnstadt von Pergamon," in *Wohnungsbau im Altertum* (Berlin, 1979), 199–223.

²⁸⁵ Published by P. Gautier, "La *Diataxis* de Michel Attaliatès," *REB* 39 (1981): 27–29.

The care that was taken to provide storage space for commodities in houses is confirmed by both texts and archaeological finds. It is very difficult to distinguish instances of householders who had their own sources of agricultural produce from those who, in good time, procured supplies for the entire year.²⁸⁶ The tendency toward self-sufficiency advocated by the prudent Kekaumenos²⁸⁷ presupposed the presence of storerooms in the house and also dictated the cultivation of fruit trees on the domestic property,²⁸⁸ sometimes to excess.²⁸⁹ The picture provided by the excavations is an eloquent one: in all cases, the ground floors or semibasements of the houses are arranged as cellars, with storage jars partially or completely sunk into the ground. Recent excavations, too, have revealed the same picture.²⁹⁰ In the shops of Pergamon,²⁹¹ and above all in the granaries of monasteries,²⁹² the same things are to be seen—well preserved but difficult to date.

The question of ground-floor cellars has been discussed elsewhere,²⁹³ but additional examples can be provided.²⁹⁴ The storage vessels were usually earthenware jars, but there are also cases of stone receptacles²⁹⁵ whose interior was lined with strong waterproof mortar or that were hewn out of the natural rock,²⁹⁶ in which case they were sometimes waterproofed and sometimes not. The jars have been studied independently, as everyday utensils, by A. L. Jakobson²⁹⁷ and more recently by Ch. Bakirtzis,²⁹⁸ who deal with their names, shapes, and uses. However, the question of interest to economic history, that of the capacity of Byzantine storage jars and consequently of the variations in the storage space of Byzantine houses in various places and at various times, has not been answered. Although excavations have yielded hundreds of such

²⁸⁶ See Kazhdan and Epstein, *Change*, 47; according to the *typikon* of the Kosmosoteira monastery.

²⁸⁷ Kekaumenos, chaps. 35, 47, 52.

²⁸⁸ Kazhdan and Epstein, *Change*.

²⁸⁹ Ioannis Tzetzes, *Epistolae*, ed. T. Pressel (Tübingen, 1851), 19.

²⁹⁰ As in the case of two unpublished buildings in Athens: a site south of the Acropolis, at 35 Dionysios Areopagites Street, on the corner of Kallisperi Street, and a Roman bath on Amalias Street, which was converted into a house during the 11th and 12th centuries (revealed during excavations for the Athens Underground, 60 m north of the Byron monument).

²⁹¹ Rheidt, "Pergamon," 628.

²⁹² Orlandos, Μοναστηριακή ἀρχιτεκτονική, 74–75.

²⁹³ Bouras, "City and Village," 617–37; idem, "Houses," 8–14. The storage vessels are not mentioned in Byzantine deeds of inheritance of the 11th to 15th century (Oikonomides, "Contents"), but it is clear that they were not regarded as movable property: since they were built into the floor of the lowest story, they were part of the house.

²⁹⁴ T. L. Shear, Jr., "The Athenian Agora: Excavations of 1980–82," *Hesperia* 53 (1984): 32; Makri et al., "Τὸ Ῥιζόκαστρο," 344–50; Kazanaki-Lappa, "Medieval Athens," 643; Louvi-Kizi, "Thebes," 634; *AA* 29.2 (1975): 204–5, and *JHS Archaeological Reports* 26 (1979–80): 31 (Palaia Epidauros); *AA* 34.2 (1979): 158 (Lakedaimon); *AA* 36.2 (1981): 189 (Thebes); *AA* 32.2 (1977): 284–85; *AA* 40.2 (1985): 285, and *AA* 41.2 (1986): 191–93 (Didymoteichon).

²⁹⁵ Identified by small stones or fragments of brick and tile; see Scranton, *Mediaeval Architecture*, 131–32, with descriptions of other storage structures, mostly of the 12th and 13th centuries.

²⁹⁶ As at Didymoteichon; see *AA* 32.2 (1977): 284–85, and *AA* 40.2 (1985): 287.

²⁹⁷ A. L. Jakobson, "Srednevekovye pifosi Severnogo Prichernomoria," *SovArh* (1966): 189–202, and idem, *Keramika i keramicheskoe proizvodstvo srednevekovoi Tavriki* (Leningrad, 1979).

²⁹⁸ Βυζαντινὰ πσυκαλογάγνηα, 110–21.

jars (whole, in fragments, or in the form of their imprint in the ground that supported them), they have never been studied in terms of metrology,²⁹⁹ while the simplicity of their shape (usually involving horizontal ribbed rings) is a discouragement to any attempt to date them.

The texts and archaeological finds also make it plain that attempts were made to ensure that the houses in the Byzantine city were self-sufficient in terms of water. There are references³⁰⁰ to wells in the courtyards of houses,³⁰¹ water tanks,³⁰² and rainwater butts or pits, of a form similar to storage pits.³⁰³ Structures of this kind have been found. Facilities for supplying the townspeople with water have not been discovered in middle Byzantine cities, and the case of Thebes remains somewhat obscure since we do not know whether the system that supplied the workshops was also in use for the public fountains and houses.³⁰⁴

Byzantium differed from medieval Europe in that landowners and other “powerful people” dwelt in the cities. Apart from the palaces built at Mistra, Trebizond, and Arta after the political and administrative fragmentation resulting from the Fourth Crusade, we know of various instances of luxurious houses³⁰⁵ that must certainly have belonged to powerful people and represented major financial investments. However, with the exception of Kherson,³⁰⁶ Preslav,³⁰⁷ and possibly of Mistra,³⁰⁸ it does not appear that there was any separation among social classes in terms of the part of the city in which they lived.

In archaeological terms, there is still no material evidence of the presence of Jews in the middle or late Byzantine city:³⁰⁹ not a single synagogue has yet been found, and there appears to be no way of distinguishing between the dwellings of Jews and Christians. On the other hand, there is a relative abundance of written information, which indicates that, at various times, efforts were made to isolate the Jews³¹⁰ or expel them

²⁹⁹ Ibid., 110 n. 5.

³⁰⁰ Ph. Koukoules, “Περὶ τὴν βυζαντινὴν οἰκίαν,” *ΕΕΒΣ* 12 (1936): 135–38.

³⁰¹ As, for example, in a large house in Corinth south of the south stoa. See H. Robinson, “American Excavations at Corinth,” *ΑΔ* 19.2 (1964): 100, pl. 103b.

³⁰² As, for example, at Mouchli. See N. Moutsopoulos, “Βυζαντινὰ σπῖτια στὸ Μουχλὶ τῆς Ἀρκαδίας,” *Βυζαντινά* 13 (1985): 326.

³⁰³ As, for example, at Didymoteichon. See *ΑΔ* 40.2 (1985): 287.

³⁰⁴ Louvi-Kizi, “Thebes,” 634–37.

³⁰⁵ Such as the so-called small palace and Laskaris house at Mistra. See Orlandos, “Μυστρᾶς,” 1–114, and A. and C. Kalligas, “Τὸ σπῖτι τοῦ Λάσκαρη στὸ Μυστρᾶ,” *Δελτ.Χριστ.Ἀρχ.Ἐτ.* 13 (1985–86): 261–77.

³⁰⁶ Bortoli and Kazanski, “Kherson,” 659, 664.

³⁰⁷ Jordanov, “Preslav,” 668.

³⁰⁸ Orlandos, “Μυστρᾶς,” 9.

³⁰⁹ With the exception of some tombstones, certainly not in their original location.

³¹⁰ A partial bibliography would include Jacoby, “Les quartiers juifs,” 127–227; Jacoby, “Silk,” *passim*; idem, “Les Juifs de Byzance: Une communauté marginalisée,” in *Οἱ περιθωριακοὶ στὸ Βυζάντιο*, ed. Ch. Maltezou (Athens, 1993), 103–54; J. Starr, *The Jews in the Byzantine Empire, 641–1204* (Athens, 1939), 43ff. For Strobilos, see Foss, “Strobilos,” 164, 167; for Thessalonike, see Tafrali, *Thessalonique*, 144, 145; for Thebes, see Louvi-Kizi, “Thebes,” 637–38; for Lakedaimon, see S. Bowman, “The Jewish Settlement in Sparta and Mistra,” *BNJ* 22 (1977–84): 131–46; for Bari, see V. von Falkenhausen,

from the city.³¹¹ Given the involvement of Jews in the manufacturing sector, this phenomenon is of a certain interest from the point of view of economic history.

The same reasoning explains the reference here to the separate communities of foreign merchants that appeared in Byzantium at an ever-increasing rate. Apart from the well-known communities in Constantinople, there were foreign merchants in the cities of Asia Minor,³¹² Russians in Kherson,³¹³ unspecified “Franks” in Tŭrnovo,³¹⁴ and Venetians and Pisans in Thessalian Almyros.³¹⁵ It is probable that three medieval towers recently identified at the latter city³¹⁶ were in some way connected with these foreign communities.

With the exception of the arrangements for the city’s security, already discussed, the amenities providing services for the Byzantine city dwellers are of limited and indirect importance for the economic history of the empire. In any case, very few archaeological traces of them have remained to study. However, a brief description of these facilities may be of some value, since they were connected with the urban way of life of ancient times as well as with land use in the provincial cities of the Middle Ages.

There seems little doubt that—other than in cities such as Mistra, Trebizond, and Arta, which became administrative centers during the late Byzantine period—public buildings were few in number.³¹⁷ Here there is a sharp contrast with the cities of the ancient Greek, Roman, and early Christian periods, and with the towns of medieval Europe.³¹⁸ The building called the *Praitorion* was the residence of the *strategos* of the theme;³¹⁹ it would have had premises for the guard, an office with an archive, and a prison. Kekaumenos³²⁰ sees it as a location for meetings, which is difficult to understand if we assume that it was located in the acropolis, entry to which was not permitted to ordinary citizens for security reasons. In the past, it was believed that an administrative building of this type had been recognized in Corinth,³²¹ but the identification has

La dominazione bizantina nell'Italia meridionale dal IX al XI secolo (Bari, 1978), 158; for Andros, see Orlandos, “Βυζαντινὰ μνημεῖα τῆς Ἀνδρου,” n. 2; and for Patras, see A. Mourtzali, “Ἡ Ἑβραϊκὴ κοινότητα Πατρῶν κατὰ τοὺς βυζαντινοὺς καὶ μεταβυζαντινοὺς χρόνους,” in *Ἑταιρεία Μελέτης Ἑλληνικοῦ Ἑβραϊσμοῦ. Πρακτικὰ Α' Συμποσίου Ἱστορίας* (Thessalonike, 1991). In the lower city of Rhodes, during the first period of rule by the Knights of St. John, there were two Jewish quarters, the Upper and the Lower, outside the walls and directly adjacent to the harbor.

³¹¹ Lambros, “Ὁ βίος Νίκωνος τοῦ Μετανοεῖτε,” 163–66, 224.

³¹² Vryonis, *Decline*, 10–13.

³¹³ Bortoli and Kazanski, “Kherson,” 664.

³¹⁴ Dochev, “Tŭrnovo,” 677. Here a castle of the Franks is mentioned.

³¹⁵ A. Avramea, *Ἡ Βυζαντινὴ Θεσσαλία μέχρι τοῦ 1204* (Athens, 1974), 166–73.

³¹⁶ AD 37.2 (1982): 258; on the seafront at the spot known as Tsingeli and probably of the 12th century.

³¹⁷ Bouras, “City and Village,” 645.

³¹⁸ R. Lopez, “L’architecture civile des villes médiévales: Exemples et plans de recherche,” in *Les constructions civiles d’intérêt public dans les villes d’Europe au Moyen Age* (Brussels, 1971), 15–31, 201–7.

³¹⁹ Constantine Porphyrogenetos, *De Thematribus et de Administrando Imperio*, ed. I. Bekker (Bonn, 1840), 16–17.

³²⁰ Kekaumenos, chap. 35.

³²¹ Scranton, *Mediaeval Architecture*, 46–47.

now been called into question.³²² Traces of public buildings, one of them a mint, have been found at Kherson,³²³ and palaces, the residence of the patriarch, and administrative chambers have been recognized in the inner city of Preslav.³²⁴ The prison of Ephesos, known to us from an incident during the iconoclastic controversy,³²⁵ was housed in an abandoned ancient bathhouse, as was the prison of Constantinople, known by the name of *Noumera*.³²⁶ In late Byzantine palaces such as those of Mistra and Trebizond, there must certainly have been provision for administrative services of all kinds, but it is not possible to identify separate functions amid the ruins that have survived.

The aqueducts of the Byzantine cities have never been studied systematically, and our knowledge of them is very limited. Very few of the aqueducts of late antiquity survived the Dark Ages, and they were largely replaced by tanks, rainwater cisterns, and wells during the middle Byzantine period. However, Thessalonike retained the early Christian system of aqueducts, which supplied it with water from Mount Horti-ates and the underground tanks³²⁷ that had been constructed, like those in Constantinople, to allow the city to withstand a prolonged siege. I have already noted the system by which the workshops of Thebes were supplied with water; components of it are constantly being revealed by excavations,³²⁸ and we do not know how far they ought to be connected with the aqueduct of St. John Kaloktenes, dating from the twelfth century.³²⁹ The aqueduct of Hadrian in Athens was certainly still in operation during the middle Byzantine period. In Mistra a new aqueduct brought water to the upper gate of the city.

Much has already been written of the altered significance of bathhouses in the everyday life of Byzantine cities after the Dark Ages.³³⁰ The written sources supply a wide range of information³³¹ not only about the existence and operation of baths during the period under examination but also about their economic significance. Public baths were leased to those who operated them,³³² and others were owned by monasteries,³³³

³²² Sanders, "Corinth," 650.

³²³ Bortoli and Kazanski, "Kherson," 660, 662.

³²⁴ Jordanov, "Preslav," 668.

³²⁵ "Βίος Ἀγίου Στεφάνου τοῦ νέου," PG 100:1164ff.

³²⁶ Müller-Wiener, *Bildlexikon* 51; for the baths of Zeuxippos, see R. Guiland, "Les Noumera," *REB* 19 (1961): 401–18.

³²⁷ Tafrali, *Thessalonique*, 115–19.

³²⁸ AA 41.2 (1986): 27–28, drawing 4, p. 30.

³²⁹ A. Keramopoulos, "Θηβαϊκά," AA 3 (1917): 19, 123, and Louvi-Kizi, "Thebes," 634.

³³⁰ C. Mango, "Daily Life in Byzantium," in *Akten XVI. Internationalen Byzantinistenkongress* (as above, note 5), 338ff; A. Karpozilos et al., "Baths," *ODB*, 271ff.

³³¹ Bouras, "Town and Village," 643–44; A. Berger, *Das Bad in der byzantinischen Zeit* (Munich, 1982), 1–172.

³³² Μεσαιωνική Βιβλιοθήκη, ed. K. Sathas, 8 vols. (Venice-Paris, 1872–94; repr. Athens, 1972), 6:624: types of Byzantine contract: ἄκτος πακτωπικοῦ λουετροῦ (contract for a bath under *pakton*), no. 15.

³³³ S. Eustratiades, "Τυπικὸν μονῆς Ἀγίου Μάμαντος," Ἑλληνικά 1 (1928): 306, 307, and S. Lambros, "Ὁ Μαρκιανὸς κώδιξ 524," Νέος Ἑλλ. 8 (1911): 12, no. 36 (bath of the Hodegon monastery).

which also rented them out. The material remains of middle Byzantine bathhouses have quite frequently been found, or studied better, in recent years, including those of Lakedaimon,³³⁴ Paramythia,³³⁵ Corinth,³³⁶ Episkopi (of Ierapetra in Crete),³³⁷ Naupaktos,³³⁸ and Ioannina.³³⁹ It seems that the late Roman baths of Thessalonike³⁴⁰ were used again, after slight modifications, in middle Byzantine times. Unfortunately, however, we have no information about the integration of these baths into the urban fabric or about how they were supplied with water during the periods when they were operating.

Open spaces for sports—known as *tzynganisteria*³⁴¹ in imitation of that of Constantinople—were, in the provinces, associated with the local aristocracy, who had retained some of the practices of late antiquity. There are references to such areas in Lakedaimon,³⁴² Athens,³⁴³ and Ephesos,³⁴⁴ and they can be tentatively identified in Trebizond.³⁴⁵ By the middle Byzantine period, the stadiums of Thessalonike³⁴⁶ and Serres³⁴⁷ were distant memories. It is not clear where the *tzynganisteria* were located, but given that they must have been quite extensive, they should be sought outside the walls. That of Athens, according to the *Praktikon*, was inside the wall of Themistocles.

The inns of late antiquity, providing hospitality in the cities, seem to have survived into the middle Byzantine period, though there were certainly far fewer of them. At Pylai in Asia Minor there were state-owned caravanserais³⁴⁸ for merchants, and at a later date there is a reference to an inn near Nicaea.³⁴⁹ However, it was more common for hospitality to take the form of charity: Gregory Pakourianos built three hospices—at Stenimachos and Marmarion and in the monastery of St. Nicholas—endowing them with the revenue they would require.³⁵⁰ Similar instances are also referred to in a *praktikon* of the fourteenth century³⁵¹ and in Athonite documents.³⁵² A guesthouse of this

³³⁴ Ch. Bouras, “Ἐνα βυζαντινὸ λουτρὸ στὴ Λακεδαίμονία,” *Ἀρχ.Ἐφ.* (1982): 99–112, pls. 19, 20.

³³⁵ *ΑΔ* 29.2 (1973–74): 624, pl. 450, and *ΑΔ* 32.2 (1977): 163.

³³⁶ Sanders, “Corinth,” 652.

³³⁷ K. Mylopotamitaki, “Ὁ ναὸς τῶν Ἀγίων Γεωργίου καὶ Χαράλαμπου στὴν Ἐπισκοπὴ Ἱεράπετρας,” *Δελτ.Χριστ.Ἀρχ.Ἐτ.* 12 (1984): 446–48.

³³⁸ *ΑΔ* 36.2 (1981): 293, pl. 194B; *ΑΔ* 37.2 (1982): 278, pl. 179.

³³⁹ *ΑΔ* 38.2 (1983): 245–49.

³⁴⁰ *ΑΔ* 35.2 (1980): 361–62.

³⁴¹ A. Kazhdan, “Tzykanisterion,” in *ODB*, 2137.

³⁴² Lambros, “Ὁ βίος Νίκωνος τοῦ Μετανοεῖτε,” 172, 225.

³⁴³ Kazanaki-Lappa, “Medieval Athens,” 643.

³⁴⁴ Foss, *Ephesus*, 109 n. 19.

³⁴⁵ Bryer and Winfield, *Pontos*, 178.

³⁴⁶ Tafrali, *Thessalonique*, 127–29.

³⁴⁷ Nikolaou, *Σερρών*, 35 n. 5.

³⁴⁸ Vryonis, *Decline*, 13.

³⁴⁹ A. Kazhdan and A.-M. Talbot, “Inn,” *ODB*, 995.

³⁵⁰ Lemerle, “Le *typikon* de Grégoire Pakourianos,” 151.

³⁵¹ A. Guillou, *Les archives de Saint-Jean-Prodrôme sur le Mont Ménéce* (Paris, 1955), n. 35, p. 116.

³⁵² *Actes de Xénophon*, ed. D. Papachryssanthou, *Archives de l’Athos* (Paris, 1986), no. 23.22.

kind has been recognized in the ruins of the little monastery found during excavations in Corinth.³⁵³

Little by little, burial grounds came to be inside the walls of cities, in a departure from the practices of antiquity.³⁵⁴ The picture revealed by excavations is not usually of a properly organized cemetery, but of scattered graves,³⁵⁵ most of them impossible to date. As a result, we do not know in what circumstances, and why, it came about that the dead were buried even inside the citadels³⁵⁶ or in a central part of the city. Without going very deeply into the matter, one could mention numerous instances of interments in apparently random positions,³⁵⁷ close to or over the ruins of churches,³⁵⁸ in empty parts of the city³⁵⁹ and outside the walls.³⁶⁰

The absence of design and planning, and the drop in the value of land of which all the above is evidence, are connected with the problem of solid waste disposal. In the Middle Ages, of course, solid waste was not produced in great quantities, since most materials were consumed fully or recycled. It would seem that, as was also the case in other periods,³⁶¹ solid waste was dumped in abandoned buildings, streambeds, moats, and disused quarries. There is little written information from the eighth to the fifteenth century,³⁶² but some finds have come to light: the disused pits of manufacturing units in Thebes were used for the dumping of solid waste,³⁶³ as were those close to the pottery works in Arta,³⁶⁴ but in the early years of the rule of the Knights of St. John, rubbish was causing a problem in the harbor at Rhodes. Nikephoros Gregoras, writing in the fourteenth century, refers to the neglect of old buildings and the tendency for them to be given over to ignoble uses.³⁶⁵ As for the drainage of storm water and liquid waste, suffice it to recall once again that there was a vast difference in terms of organization and planning between antiquity and the Byzantium of the middle period.³⁶⁶ In Athens, the ancient drain along the Stoa Poikile, in the Agora, was still in use during the middle Byzantine period, as evidenced by the coins that have been found in its bed.

There are some references to warehouses for public use,³⁶⁷ but in a manner very

³⁵³ Sanders, "Corinth," 653.

³⁵⁴ G. Dagron, "Le christianisme dans la ville byzantine," *DOP* 31 (1977): 11ff.

³⁵⁵ Sanders, "Corinth," 648.

³⁵⁶ As, for instance, in Athens.

³⁵⁷ *AA* 34.2 (1979): 166; *AA* 36.2 (1981): 189–90; *AA* 41.2 (1986): 107, 109.

³⁵⁸ *AA* 31.2 (1976): 99–102, 126.

³⁵⁹ Vavyloupoulou-Charitonidou, "Céramique d'offrande," 209 n. 1.

³⁶⁰ *AA* 41.2 (1986): 175.

³⁶¹ Mango, *Byzantine Architecture*, 30 and 35 n. 2.

³⁶² Karpozilos, "Περὶ ἀποπάτων," 350–51.

³⁶³ Louvi-Kizi, "Thebes," 636–37; *AA* 35.2 (1980): 218–19; *AA* 41.2 (1986): 29–30.

³⁶⁴ *AA* 41.2 (1986): 107.

³⁶⁵ Karpozilos, "Περὶ ἀποπάτων," 351–52.

³⁶⁶ *Ibid.*, 350–51.

³⁶⁷ Vryonis, *Decline*, 12 n. 49 (Nicaea): Attaleiates (*Michaelis Attaliothae Historia*, ed. I. Bekker [Bonn, 1858], 201–4) refers to the grain warehouses of Michael VII at Rhaidestos in Thrace (cf. Laiou, "Exchange and Trade," 742–43).

different from the practice in the Italian cities of the same period; the spreading use of cash for transactions meant that there was little point in constructing such buildings. A whole series of other special-purpose buildings that had been part of the urban fabric of ancient cities—theaters, libraries, physical education facilities, spaces for public meetings, and so on—were equally useless in the medieval cities of the Byzantine provinces and were not to be found there. Some of the functions they would have fulfilled—education,³⁶⁸ the keeping of books³⁶⁹ and of weights and measures³⁷⁰—were taken over by the churches and monasteries.

The churches that once stood in the cities or are part of their urban fabric even today might belong to monasteries, private individuals, or parishes. Their value for the economic history of Byzantium lies chiefly in the documentation they provide of the investment of larger or smaller sums of money. Where the structure of the city is concerned, their significance is connected primarily with their role as points of reference, centers for the parish, and places where the city dwellers could meet and contact one another.

This brief examination of the provincial cities of Byzantium has demonstrated the lack of uniformity in the information at our disposal and the impossibility of conducting systematic studies either of the urban fabric or of the evolution of individual cities. Reexamination and interpretation of the texts and, above all, exhaustive archaeological research into the remains that survive would enhance our information and allow us, in each case, to form detailed and convincing pictures of the cities of the empire in the Middle Ages. This, in turn, will more effectively provide material for the study of the economic history of Byzantium.

³⁶⁸ Foss and Scott, "Sardis," 620; the cathedral as a local center of education in the time of Nikephoros Chrysoberges.

³⁶⁹ Orlandos, *Μοναστηριακή ἀρχιτεκτονική*, 108–10.

³⁷⁰ According to Novel 118 of Justinian, chap. 15, cited in G. Vikan and J. Nesbitt, *Security in Byzantium* (Washington, D.C., 1980), 31.

Medieval Constantinople: Built Environment and Urban Development

Paul Magdalino

In 600 Constantinople was a city of three hundred thousand to five hundred thousand people.¹ Its built environment represented three cumulative phases of development from the foundation in 324–330. The first phase was the massive enlargement and upgrading, under Constantine I and his fourth-century successors, of the ancient city of Byzantium through the addition of traditional units of ancient urban planning: a new perimeter wall; a vast civic and administrative complex including the Hippodrome, the imperial Great Palace, and the urban prefecture; passing through and beyond this, an extensive network of fora, colonnades, and sculptured monuments laid out along and across the branching artery formed by the central avenue (Mese) that was the convergence and termination of the access roads from the west; public baths; an elaborate infrastructure of ports, granaries, an aqueduct, and fountains for the adduction and distribution of food and water; and the indispensable complement to all this public building, the grand residences and humble tenements of the various classes of immigrants who flocked to the new center of power. The churches that represented the triumph of the new state religion were, of course, new elements, but initially they went with the grain of the existing urban fabric. The cathedral churches of Hagia Eirene (Holy Peace), founded by Constantine, and Hagia Sophia (Holy Wisdom), added by Constantius II, formed part of the central civic complex. The church of the Holy Apostles owed its prominently eccentric position, on a hill near the Constantinian wall, to its origin as the founder's mausoleum, and the earliest martyr shrines were either marginal to the built-up area or away from the main thoroughfares.

The second phase, from ca. 405, was mainly characterized by the adaptation of this program to the growing insecurity of the city's European hinterland, which made not

¹ In general, see C. Mango, *Le développement urbain de Constantinople, IVe–VIIe siècles*, 2d ed. (Paris, 1990); idem, "The Development of Constantinople as an Urban Centre," in *The Seventeenth International Byzantine Congress, Main Papers* (New Rochelle, N.Y., 1986); C. Mango and G. Dagron, eds., *Constantinople and Its Hinterland* (Aldershot, 1995); and P. Magdalino, *Constantinople médiévale: Etudes sur l'évolution des structures urbaines* (Paris, 1996). See also the papers from the 1998 Dumbarton Oaks symposium on Constantinople in *DOP* 54 (2000).

only the land walls but also the long, exposed aqueduct vulnerable to invaders. The urgent need for water storage was met both by the incorporation of covered cisterns into major new building or rebuilding projects and by the sinking of large open-air reservoirs in the hills to the west of the Constantinian wall. It was mainly with a view to protecting these facilities that Theodosios II built a new set of land fortifications, thus creating a zone between the two walls “that was neither truly urban nor truly suburban.”²

In the third phase of its development, from 450, the late antique city became an early Christian city. Although traditional urban building continued, it was outstripped by a proliferation of churches, which not only gave the urban landscape a new look but increasingly redrew the social and cultural map. Churches became the focal and defining points of urban neighborhoods; each new foundation enriched the liturgical calendar and therefore the ritual life of the community. Many churches were associated with old-age homes, hospitals, or poor-hostels, or formed the venues of pious confraternities that performed various liturgical and charitable services. No church was simply an isolated hall of worship but was invariably surrounded by a complex of courtyards, porticoes, and chambers that could serve a variety of purposes; it frequently included a bathhouse. The way was thus prepared for certain basic functions of urban life—baths, schools, and notaries’ offices—to move within church precincts.

Church building was if anything stimulated by the catastrophic acts of God that chroniclers recorded with increasing frequency in this period: fires, such as those of 465 and 532; earthquakes, such as those of 447 and 557; and even the bubonic plague, which hit Constantinople in 542 and remained endemic there for the next two hundred years. In the long term, the enhanced religiosity induced by the plague was probably of greater consequence than its demographic effects, for while the initial outbreak reportedly carried off two-thirds of the urban population, it was not long before the city was suffering from food and water shortages. The plague certainly did not put a stop to building activity, which picked up again in the 550s and remained at a high level for the rest of the century. Justinian’s rebuilding of Hagia Sophia in 532–537 is deservedly regarded as the culmination of early Christian architecture, but it was also one of the earliest in a series of sixth-century structures that were to be central to the life of the medieval city. These included the church of the Holy Apostles, rebuilt by Justinian, and the two great shrines of the Virgin, that of the Chalkoprateia, rebuilt by Justin II (565–578), and that of the Blachernae, a rebuilding started by Justin II and completed under his successors, Tiberius II (578–582) and Maurice (582–602). The period 565–602 also saw several other foundations that, though less important as cult centers, were no less important in later centuries as the locations of some of the capital’s main schools, notarial offices, and bathing establishments. In secular building, the additions that Justin II and Tiberius made to the Great Palace were to become the hub of imperial ceremonial and financial administration, and by renovating the Port of Julian on the Sea of Marmara, Justinian and Justin guaranteed its future as the main port facility of the next three centuries.

² Mango, “Développement,” 125.

In the first half of the seventh century, Egypt was conquered temporarily by the Persians and then definitively by the Arabs, who thus deprived Constantinople of its main source of grain. In 626 the Avars cut the aqueduct. The empire's finances, diminished by devastation and loss of territory, were consumed by the life-and-death struggle with these and other enemies. Contemporary sources do not record the impact on urban life, but the government was undoubtedly obliged to reduce the urban population, at least until local agricultural production was stepped up and dietary habits changed to allow for greater consumption of meat and fish. Almost no major new building or restoration project is reliably attested between 610 and 760. The main area of settlement seems to have contracted around the old Constantinian civic center and the harbor of Julian, the only port of entry and exit mentioned in sources of the seventh to tenth centuries. It was probably in this period of depopulation that burials began to take place within the Constantinian wall and that the monumental spaces on the edge of the civic center—the amphitheater on the Acropolis, the Strategion near the Golden Horn, and some of the fora along the Mese—began to be used as places of execution and markets for livestock. The great baths, theaters, and sculptured monuments of the fourth and fifth centuries fell into decay and came to be regarded as objects of superstitious dread from a legendary and exotic past. Even the upkeep of churches strained the available resources, and Frankish ambassadors in the mid-to-late eighth century returned with reports of basilicas that lacked proper lighting or even roofing.³

But if the fourth to sixth centuries had built more than the seventh and eighth centuries could afford to maintain, enough was maintained to serve the basic needs of a population of seventy thousand or more. There is reason to believe that at least the major churches built or restored in the sixth century were kept in good working order, along with their ancillary services. The state sector is unlikely to have diminished, since Constantinople remained the capital of a state that continued to conduct war and diplomacy on a worldwide scale and was able to repel two massive Arab assaults on the city in 675–678 and 717. The fact that Emperor Justinian II (685–695, 705–711) made substantial additions to the Great Palace suggests that this great governmental complex was on the increase as it took on the functions of other public institutions. The wall that the same emperor built around the palace emphasized its growing role as a city within the city.⁴ This prompts the observation that although Constantinople declined as a great urban unit, it continued to flourish as a network of semi-urban nuclei of production and consumption, scattered throughout the urban area, between the walls, and throughout the suburban hinterland. At the consuming end were the urban and suburban “houses” (*oikoi*)—the churches, monasteries, charitable houses, and official residences; at the producing end were their domains (*proasteia*) and trading emporia clustered around the Bosphoros and the Sea of Marmara. “There are villas and estates lining both banks . . . and innumerable ships and vessels go back and forth, carrying

³ *Libri Carolini*, IV.3 in PL 98:1188.

⁴ Theophanes, *Chronographia*, ed. C. de Boor, 2 vols. (Leipzig, 1883–85; repr. Hildesheim, 1980), I:367.

all sorts of merchandise from these estates to the capital. The number of these ships cannot be estimated.”⁵

This description by a tenth-century Arab writer relates to a seventh-century incident and throws interesting light on the provisioning of Constantinople at the time. It shows how the government-sponsored bulk shipments of Egyptian grain were replaced by less regular but more frequent short-distance deliveries in lighter ships that could moor and unload at landing stages (*skalai*) all along the coast. Thus the city’s ancient port system was in the process of being replaced by a less concentrated and planned infrastructure that would eventually prove capable of handling the same volume of traffic. Meanwhile, however, the waterfront of the Golden Horn, at least the lower part, was a depressed area. This was possibly because of associations with the bubonic plague and, in consequence, with the segregation of non-Christians and social outcasts: the Arab merchants in their compound (*mitaton*) at the “crossing” (Perama) of the Golden Horn; and the Jews, who lived “across” (Pera), at the foot of the hill occupied by the leper hospital.⁶ But the Arab *mitaton*, which must have been established in the late seventh century, created a basis for the commercial regeneration of the district, as did the simultaneous expansion of the imperial war fleet, which in 698 acquired a new base at the old harbor of the Neorion.

The early medieval decline of Constantinople reached a low point with a last devastating outbreak of plague in 746. Emperor Constantine V repopulated the city with people from mainland Greece and the Aegean islands. Some twenty years later he took similarly drastic action to remedy the effects of a severe drought, bringing in teams of workmen to repair the aqueduct, which had not functioned for 140 years. These measures marked the beginning of a revival that continued until 1204. Constantine V may have had a profound impact on the social and ideological identity of the medieval city. But it is unlikely that he significantly altered the look of the built environment that survived from the sixth century. The same impression is gained from the better-documented public building projects of his eighth- and ninth-century successors, Eirene, Theophilos, Basil I, and Leo VI. These projects were, for the most part, renovations, imitations, and conversions of existing structures; even the ambitious new complexes that Theophilos and Basil I added to the Great Palace continued a previous trend. Yet there were differences from the sixth century, whose cumulative effect would have been noticeable by 900. Less attention was now paid to the civic context of religious and palace buildings. Builders used spolia rather than freshly quarried or manufactured materials.⁷ Early Christian basilicas were restored with masonry roofs and

⁵ Mas’udi, *The Meadows of Gold: The Abbasids*, trans. P. Lunde and C. Stone (London, 1989), 322.

⁶ On the Jewish quarter, see D. Jacoby, “Les quartiers juifs de Constantinople à l’époque byzantine,” *Byzantion* 37 (1967): 167–227 (repr. in idem, *Société et démographie à Byzance et en Romanie latine* (London, 1975). There is no clear evidence for Jacoby’s assertion that the Jewish quarter was formerly on the south side of the inlet.

⁷ For recent discussion of one location, see C. Mango, “Ancient Spolia in the Great Palace of Constantinople,” in *Byzantine East, Latin West: Art-Historical Studies in Honor of Kurt Weitzmann*, ed. D. Mouriki et al. (Princeton, N.J., 1995), 645–57.

therefore, presumably, with domes.⁸ Most importantly, there was a steady accumulation of new and revived monastic foundations, comparable to the proliferation of churches in the fifth and sixth centuries.

To begin with, the main initiative came from churchmen and government officials, but from the reign of Romanos I (921–944), the contribution of emperors was decisive. Imperial foundations were large and richly endowed, and they usually comprised, in addition to the monastic community, institutions serving the laity. Monasteries, traditionally confined, with rare exceptions, to the suburbs and the zone between the walls, now became a conspicuous feature of the city center. But perhaps the most significant impact of the new foundations or refoundations was on the development of the areas at the corners of the urban triangle within the Theodosian wall: at the eastern end (monasteries of the Hodegoi and St. Lazaros, complexes of the Mangana and the Orphanotropheion), in the southwestern corner (notably the monasteries of Stoudios, St. Mamas, and the Peribleptos inside the walls and the suburban complex of the Hebdomon), and in the northwest (the Petrion complex near the Golden Horn, a large cluster of monasteries in the hills near the cisterns of Aetius and Aspar, and the large extramural complex of the Anargyroi or Kosmidion). This expansion of the monastic sector both followed and attracted new growths and shifts in lay society. A notable trend in the eleventh and twelfth centuries was the rise of the Blachernae Palace in the northwest as the favored residence of the imperial court. This was principally the work of Emperor Alexios I Komnenos (1081–1118) and a concomitant of the new dynastic system he created, which distributed public resources widely among the members of the extended imperial family, enabling them to build, or redevelop, residences and monasteries on a princely scale.

The development of the extremities was accompanied by an expansion of the city center down to and along the Golden Horn, which began in the tenth century to reclaim its role as the city's main maritime access. The commercial regeneration of the north coast may have been stimulated by a growing influx of Venetian and Amalfitan traders in association with the Arab *mitation*. Venice and Amalfi, followed by Pisa and Genoa, certainly responded to the business growth of the area by obtaining grants from the imperial government of wharfs, shops, churches, and houses for the use and profit of their citizens.⁹

We can piece together something of the “feel” of the medieval city (Fig. 1) from a variety of written sources, both foreign and Byzantine, dating from the tenth to thirteenth centuries.¹⁰ Approaching travelers traversed, or sailed past, a broad suburban

⁸ *Vita Basilii*, in *Theophanes Continuatus*, ed. I. Bekker (Bonn, 1838), 324.

⁹ On the topography of the Italian concessions, see, most recently, A. Berger, “Zur Topographie der Ufergegend am Goldenen Horn in der byzantinischen Zeit,” *IstMitt* 45 (1995): 149–65.

¹⁰ In addition to the Byzantine sources cited in the following notes, the following well-known accounts by western visitors in the age of the crusades have been used: Benjamin of Tudela, in the translation by A. Sharf, *Byzantine Jewry from Justinian to the Fourth Crusade* (London, 1971), 136; Fulcher of Chartres, *Historia Hierosolymitana, 1095–1127*, ed. H. Hagenmeyer (Heidelberg, 1913), 176–77; Odo of Deuil, *De profectione Ludovici VII in orientem*, ed. V. G. Berry (New York, 1948), 48–71; William

zone of parks and farmland, thickly dotted with monasteries, villas, and summer palaces. They saw a skyline of “high walls and lofty towers . . . rich palaces and tall churches,” with “columns looming like massive giants.”¹¹ Inside the walls, they were duly impressed by vast expanses of marble masonry and lead roofing, the ubiquitous statuary, the innumerable churches and relics, the lavish public entertainments, the glimpses and tales of fabulous wealth. The city center and the seashores were heavily built up with three- or even five-story houses.¹² Yet much of the space, even within the Constantinian walls, was farmed.¹³ Country sounds and smells pervaded the built-up area: priests kept pigs and farmers stored hay in apartment buildings;¹⁴ imperial officials operated donkey mills in the courtyards of their townhouses.¹⁵ The seamy side of overcrowded preindustrial urban living inevitably attracted less comment in the Middle Ages than it did from nineteenth-century European travelers to Istanbul, but the problems were evidently similar: main streets and squares deep in mud;¹⁶ prostitution, violent crime, and homelessness in the arcades;¹⁷ stray dogs;¹⁸ the ever-present risk of violent, uncontrollable fires.¹⁹ The contrasts and the different functions of the urban scene were all to be found side by side within a single neighborhood. There was, however, a clearly defined and long-established commercial district, centered on the Mese from the Forum Tauri to the Augoustaion and extending northward and southward to the seashores. Associated mainly with this area were the colonies of the many foreign peoples who had business with Constantinople. Besides the Italians, the Arabs,

of Tyre, *Chronicon*, 20.23, 22.4, 14, ed. R. B. C. Huygens, *Corpus christianorum, continuatio medievalis* 63A (Turnhout, 1986), 2:943–46, 1009–11, 1024–25; Robert of Clari, *La conquête de Constantinople*, ed. P. Lauer (Paris, 1924), *passim*; Geoffrey of Villehardouin, *La conquête de Constantinople*, ed. E. Faral (Paris, 1938), 1:130–33, 194–45; 2:48–55. See also the fascinating late 11th-century text published by K. Ciggaar, “Une description de Constantinople dans le *Tarragonensis* 55,” *REB* 53 (1995): 117–40. Further references, and fuller coverage of some aspects, can be found in P. Magdalino, *The Empire of Manuel I Komnenos, 1143–1180* (Cambridge, 1993), 112–23.

¹¹ Constantine of Rhodes, ed. E. Legrand, “Description des oeuvres d’art et de l’église des Saints-Apôtres à Constantinople,” *REG* 9 (1896): p. 46, lines 335–36.

¹² *Ioannis Tzetzae, Epistulae*, ed. P. A. M. Leone (Leipzig, 1972), 31–34; *idem, Historiae*, ed. P. A. M. Leone (Naples, 1968), 190–91. Cf. Ph. Koukoules, *Βυζαντινὸν Βίος καὶ Πολιτισμὸς* 6 vols. (Athens, 1948–57), 4:261–65.

¹³ Nicholas Mesarites, ed. G. Downey, “Description of the Church of the Holy Apostles at Constantinople,” *TAPS* 47 (1957): 897.

¹⁴ Tzetzes, *Epistulae*, 31–34.

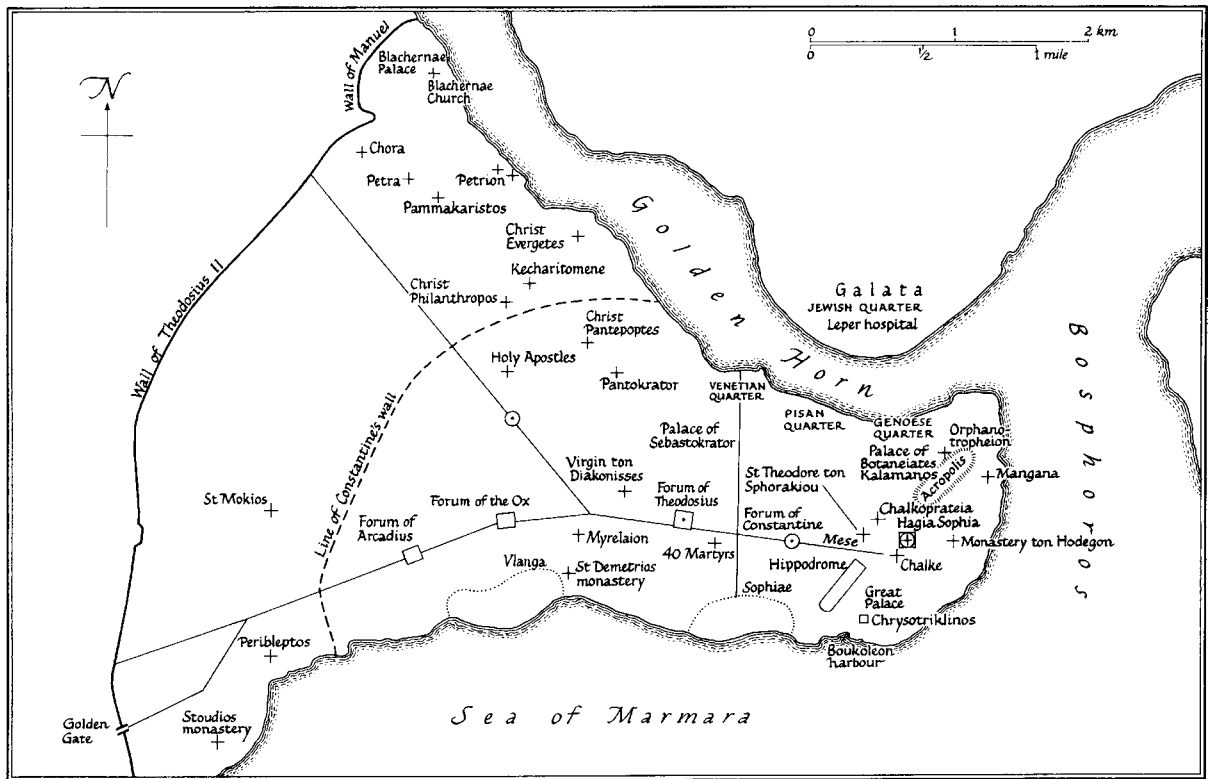
¹⁵ P. Gautier, “La *Diataxis* de Michel Attaleiate,” *REB* 39 (1981): 29.

¹⁶ G. Mercati, “Gli aneddoti d’un codice Bolognese,” *BZ* 6 (1897): 140–42; John Apokaukos, ed. N. A. Bees, “Unedierte Schriftstücke aus der Kanzlei des Johannes Apokaukos des Metropolit von Naupaktos (in Aetolien), herausgegeben aus dem Nachlass von N. A. Bees von E. Bees-Seferli,” *BNJ* 21 (1971–74): 150–51.

¹⁷ Nicholas Mesarites, *Die Palastrevolution des Johannes Komnenos*, Programm des königlichen alten Gymnasiums zu Würzburg für das Studienjahr 1906/1907 (Würzburg, 1907), 24.

¹⁸ Symeon the New Theologian, *Traité théologiques et éthiques*, ed. J. Darrouzès (Paris, 1967), 2: 30–33.

¹⁹ For example, that which swept inland from the Golden Horn on 25 July 1197, destroying port facilities, storehouses, churches, and palaces, and inspiring a tragic declamation in verse by Constantine Stilbes: see P. Magdalino, “Constantinopolitana,” in *AETOS: Studies in Honour of Cyril Mango*, ed. I. Ševčenko and I. Hutter (Stuttgart, 1998), 227–30.



1. Komnenian Constantinople (after P. Magdalino, *The Empire of Manuel I Komnenos* [Cambridge, 1993])



2. Late medieval Constantinople. Cristoforo Buondelmonti, *Liber insularum archipelagi*, ca. 1450. Private collection (reproduced courtesy of Kenneth Nebenzahl, copyright 1998)

and the Jews, already mentioned, Armenians, Syrians, and Russians had “ethnic neighborhoods,” and Georgians and Turks were numerous.²⁰

The population of Constantinople, including merchants, litigants, and other transients, may have numbered as much as four hundred thousand in 1204 and occupied a built-up area corresponding very closely to that of the sixth-century city, with a dense concentration around the commercial district and tentacles of development along the seashores and the branches of the Mese leading to secondary nuclei in the northwest and southwest corners. The settlement used and reused the buildings of the late antique, early Christian, and earlier medieval phases in ways that ranged from careful conservation through structural conversion to outright quarrying. Whether the result was a pleasing blend or an incongruous jumble is impossible to say, but no part of the city was entirely a recent creation, and Constantinople was probably more closely, richly, and naturally in touch with its physical origins than any other city surviving from Greco-Roman antiquity.

All this changed drastically with the arrival of the Fourth Crusade in 1203.²¹ The presence of the crusading army not only culminated in a violent sack that dispersed and destroyed the accumulated wealth and culture of centuries; it was accompanied by three terrible fires that ravaged the whole northern and central sections of the city, and it resulted in the establishment of a Latin regime that set off a steady exodus of Constantinopolitans to the Greek centers of government in exile. Far from restoring the damage done in 1203–4, the impoverished Latin emperors melted down statues for coin and sold the lead from palace roofs, while the Venetians, who now controlled much of the city, exported their declining profits, along with choice relics and architectural spolia for their churches.

When Constantinople reverted to Greek rule in 1261, Emperor Michael VIII Palaiologos spared no effort or expense to restore his capital, like his empire, to its twelfth-century greatness. But the resources of the Palaiologan empire were inadequate to both tasks. Michael could restore the basic shell of traditional authority and worship—the walls, the Blachernae Palace, parts of the Great Palace, Hagia Sophia, and a few other churches and monasteries—but even this was more than his successors could afford to keep in repair, let alone to fill with urban redevelopment. They were thwarted by the irreversible decline in their territorial base and by the development of the Genoese trading colony in the suburb of Pera into a separate fortified settlement, where

²⁰ See the anonymous description of the late 11th century in Ciggaar, “Constantinople,” 119; for the Russians, see Anthony of Novgorod, *Itinéraires russes en Orient*, trans. B. de Khitrowo (Geneva, 1889), 105; for the Georgians and Turks, see *Nicetae Choniatae, Historia*, ed. J. L. van Dieten, 2 vols. (Berlin–New York, 1975), 1:233, 493–44.

²¹ There is no up-to-date study of urban development in the late Byzantine period, but one may consult N. Oikonomides, *Hommes d'affaires grecs et latins à Constantinople, XIIIe–XVe siècles* (Montreal, 1979); G. Majeska, *Russian Travelers to Constantinople in the Fourteenth and Fifteenth Centuries* (Washington, D.C., 1984); A.-M. Talbot, “The Restoration of Constantinople under Michael VIII,” *DOP* 47 (1993): 243–61; V. Kidonopoulos, *Bauten in Konstantinopel, 1204–1328* (Wiesbaden, 1994); and, for the Latin occupation, L. Buenger Robbert, “Rialto Businessmen and Constantinople, 1204–61,” *DOP* 49 (1995): 43–58; T. F. Madden, “The Fires of the Fourth Crusade in Constantinople, 1203–1204: A Damage Assessment,” *BZ* 84/85 (1991–92): 72–93.

immunity from imperial tolls drew business away from the old city. Constantinople became once more, as in the seventh and eighth centuries, a ruralized network of scattered nuclei, though with several important differences (Fig. 2). It was now the south coast that declined, as the Great Palace fell into decay, the Port of Julian became a military naval base, and the Jewish quarter, with its stinking tanneries, moved from Pera to Vlanga, near the former Port of Theodosios. The great open cisterns ran dry and served as kitchen gardens. The main foci of power and wealth were now at the corners of the urban triangle, particularly in the Blachernae quarter, and at the east end, where the patriarchal church of Hagia Sophia still remained the center of religious life, but as such looked more to the monasteries on and around the Acropolis than to the decaying civic center to the west.²² The shore of the Golden Horn, where the Venetians reestablished themselves, took over from the Mese as the main commercial axis. Finally, in a complete inversion of the early medieval situation, the state sector was weak and fragmented, but building continued, albeit on a modest scale. The Palaiologoi operated an even more devolved version of the Komnenian dynastic system and literally encouraged the imperial nobility to enrich themselves at the state's expense; individuals accordingly built themselves sumptuous palaces and commissioned extensive additions or improvements to old monasteries.²³ Such munificence became rarer from the mid-fourteenth century, when Constantinople was hit by the Black Death and progressively deprived of its agricultural hinterland. Yet profits were to be made in commerce, in spite of, but also in association with, the predominant Genoese and Venetian enterprises. Western visitors described a space "made up of villages, more empty than full," a ghost city of crumbling tourist attractions that caught the eye of humanists and invited comparison with Rome.²⁴ But imperial Constantinople, like papal Rome after the Great Schism, was untypical of the wider Mediterranean urban scene, with which it was inextricably involved. In the final decades before the fall, the population numbered seventy thousand, and along the Golden Horn, on the hills above the busy markets, the new three-story houses of a prosperous aristocratic bourgeoisie turned their back on the urban decay behind them, creating a built environment that had much in common with the bustling Genoese business center across the water.²⁵

²² G. Majeska, "The Sanctification of the First Region: Urban Reorientation in Palaeologan Constantinople," in *Actes du XV^e Congrès international d'Etudes byzantines*, Athènes, 1976 (Athens, 1981), 2:359–63.

²³ The most striking example is Theodore Metochites, whose monastery church still stands, and whose palace was so splendid that, after his fall, Emperor Andronikos III made a diplomatic present of the marble flooring to the khan of the Golden Horde: P. A. Underwood, ed., *The Kariye Djami*, 4 vols. (Princeton, N.J., 1966, 1975), esp. I. Ševčenko in vol. 4:28–32; *Nicephori Gregorae Byzantina Historia*, ed. L. Schopen and I. Bekker, 3 vols. (Bonn, 1822–55), 1:459.

²⁴ Bertrandon de la Broquière, *Le voyage d'outremer de Bertrandon de la Broquière*, ed. C. Schefer (Paris, 1892), 150–67; Ruy Gonzalez de Clavijo, *Narrative of the Embassy to the Court of Timour at Samarkand, A.D. 1403–6*, trans. C. R. Markham (London, 1859), 29–49; Pero Tafur, *Travels and Adventures*, trans. M. Letts (London, 1926), 138–48; Manuel Chrysoloras, *Letter to John Palaeologus*, in PG 156:45ff; G. Gerola, "Le vedute di Costantinopoli di Cristoforo Buondemonti," *SBN* 3 (1931): 247–79.

²⁵ Ἰωσήφ Μοναχοῦ τοῦ Βρυεννίου τὰ εὐρεθέντα, ed. E. Voulgaris (Leipzig, 1768); *Johannes Chortasmenos, ca. 1370–ca. 1436/7: Briefe, Gedichte und kleine Schriften*, ed. H. Hunger (Vienna, 1969), 190–92.

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Master Craftsmen, Craftsmen, and Building Activities in Byzantium

Charalambos Bouras

To judge from the written sources and from the surviving monuments, building was one of the most important activities carried out in Byzantium and an essential component of life. Significant sums of money were invested in the construction and ornamentation of buildings, mostly of a religious or generally public nature, since in Byzantine society sponsors reinforced their image and gained in social prestige when they created and donated works of art and architecture. This concept had roots in the ancient world and survived without interruption even after the fall of the empire.

Although the role of architects, craftsmen, and laborers in producing such buildings was obviously a central one, accounts of it are very scanty and always indirect. No systematic archives on the construction of major projects have survived from Byzantium (as they have in the case, for instance, of the Ottoman projects of the 16th century), nor have any theoretical or practical texts of architecture come down to us. Such questions were of very little interest to any of the authors of the time, who passed lightly over the constructional details of the buildings to which they referred and rarely provided descriptions when singing the praises of donors and founders.

The situation became still more difficult after the iconoclastic controversy. It is common knowledge that the substantive differences between the early Christian and early Byzantine periods, on the one hand, and the middle Byzantine and Palaiologan periods, on the other, also extended to the realm of architecture. It was not only the case that building projects became smaller, and consequently that the organization of their construction became simpler; it is also a fact that our information becomes still more limited. In the particular instance of the production of buildings, of their economic dimension, and of the individuals who put them into effect, the flow of information dwindles almost to nothing. However, analysis of the typological, morphological, and technological aspects of the architectural monuments themselves is sufficient to convince us of their continuity, of their constructors' loyalty to the values of the ancient heritage.

This chapter was translated by John Solman.

The publication in the early tenth century (in the reign of Leo the Wise) of the *Book of the Eparch*¹ seems to have been part of the effort to reorganize the Byzantine state after the Dark Ages where building projects, too, were concerned. It contains regulations dealing with the working methods of craftsmen in general (masons, carpenters, plasterers, locksmiths, artists) that display similarities to the rules of the late Roman period,² although the craftsmen were not viewed as members of any specific guild among the twenty-two provided for in the *Book of the Eparch*, as had been the case in Roman times. The rules deal mainly with the obligations of craftsmen toward their employers and with the role of the eparch as arbitrator in any disputes that might arise. By modern standards, the position of the craftsmen was undoubtedly a difficult one; when executing one project, for instance, they were prohibited from agreeing to the next, and could only take on a new building when they were unemployed.

Naturally enough, this unique source of information has been the object of study and the starting point for hypotheses of all kinds³ based on the state of the guilds or the *synaphia* in the Byzantine world at a much later date.⁴ The provisions determining the liabilities of the craftsmen in the event of the project proving to be ill-advised or being abandoned are enlightening, as are the sanctions provided for in each case. However, the *Book of the Eparch* has not been securely dated,⁵ and, more important, it does not seem to have had force outside Constantinople.⁶ The frequent movements of craftsmen in the Byzantine period are strong evidence that in the provinces during the middle Byzantine era there were no local guilds, but rather informal teams of craftsmen formed on a temporary basis. However the case may be, a document from Thessalonike dated 1322 confers the title of “master craftsman of the building workers” (πρωτομαῖστωρ τῶν οἰκοδόμων) on a certain *kyr* Georgios Marmaras,⁷ and this implies a form of organization broader than a mere team.

In Byzantine times, construction projects were commissioned and executed on the

¹ Leo the Wise, Τὸ Ἐπαρχικόν Βιβλίον: J. Nicole, ed., *Le Livre du Préfet* (Geneva, 1893; repr. London, 1970). The most recent edition is by J. Koder, *Das Eparchenbuch Leons des Weisen* (Vienna, 1991). For the builders, see also C. Mango, *The Byzantine Empire: Sources and Documents* (Englewood Cliffs, N.J., 1972), 206–7.

² Where liability for the discontinuation of a project already undertaken is concerned, comparisons can be made with the provisions of the Sardis inscription of 459. See H. Grégoire, *Recueil des inscriptions grecques-chrétiennes de l'Asie Mineure* (Paris, 1922), 1:112, no. 322; C. Foss, *Byzantine and Turkish Sardis* (Cambridge, Mass., 1976), 19, 20, 112, 113; and A. Kazhdan, “Κριτική,” *Byzantina* 9 (1977): 479. For the situation prior to the iconoclastic controversy, see also J.-P. Sodini, “L’artisanat urbain à l’époque paléochrétienne,” *Ktéma* 4 (1979): 71–119.

³ A. Christophilopoulos, Τὸ Ἐπαρχικόν Βιβλίον Λέοντος τοῦ Σοφοῦ καί αἱ συντεχνίαι ἐν Βυζαντίῳ (Athens, 1935); A. Stoeckle, “Spätrömische und byzantinische Zünfte,” *Klio* 9 (1911): 120.

⁴ Particularly as described by A. Choisy, *L’art de bâtir chez les byzantins* (Paris, 1883), 174–78, and N. Moutsopoulos, *Ἐκκλησίες τῆς Καστοριάς* (Thessalonike, 1992), 440–44.

⁵ See A. Kazhdan, “*Book of the Eparch*,” *ODB*, 308.

⁶ C. Mango, *Byzantine Architecture* (New York, 1976), 26. For the last period, see also R. Ousterhout, “Constantinople, Bithynia and Regional Developments in Later Palaeologan Architecture,” in *The Twilight of Byzantium*, ed. S. Ćurčić and D. Mouriki (Princeton, N.J., 1991), 79.

⁷ L. Petit and B. Korabiev, “Actes de Chilandar,” *VizVrem* 17 (1911): 178. *Kyr* Georgios was a witness to a legal instrument.



1. The builders. Biblioteca Nacional, Madrid, the Skylitzes codex (Vitr. 26-2), fol. 141v (13th–14th centuries) (after A. Grabar and M. Manoussacas, *L'illustration du manuscrit de Skylitzès de la Bibliothèque Nationale de Madrid* [Venice, 1979], pl. XXIX)



2. The building of the Temple. Bibliothèque Nationale, Paris. gr. 20, fol. 4r (10th century) (after S. Dufrenne, *L'illustration des psautiers grecs du Moyen Age*, vol. 1 [Paris, 1966], pl. 34)

basis of a written “bond” signed by the employer and the team of craftsmen who were to undertake the project. In accordance with express provisions of the *Basilics*,⁸ a contractor could serve as a middleman, undertaking to construct the entire building in return for a fixed sum. Such was the case with the *katholikon* of the Kosenitza monastery, for which St. Germanos⁹ agreed to pay a sum of 100 gold pieces (which he did not in fact have), and of the Enkleistra monastery in Cyprus,¹⁰ where, by way of contrast, St. Neophytos refused to give his consent to the commencement of building work until the entire sum necessary had been assembled. The contractor might also provide all the building materials needed, depending on circumstances.¹¹

It seems that a more common practice was for the agreement to provide for the payment of daily wages to the craftsmen of different skills and for the materials to be supplied by the employer. The dynamic method of constructing buildings, including many important ones, with modifications to the original plans,¹² and sometimes with the demolition of sections already built so as to incorporate changes,¹³ could not have been implemented without the system of payment of a daily wage.

A third method consisted of the payment by lump sum of only a part of the construction project (the system still called *fatoura* in the Greek building trade today). We have no direct account of this, but indirect evidence is to be found in the prefabricated marble or stone architectural members that reached the building site ready, or almost ready, for use.¹⁴ These can be recognized in Byzantine buildings by the builders’ symbols they bear, which were very probably used to indicate the names of those who had constructed the project and supplied its component parts. Most of the known examples date from the centuries preceding the iconoclastic controversy,¹⁵ but the tradition seems to have continued into the middle Byzantine period.¹⁶

⁸ *Basilicorum libri LX*, ed. H. J. Scheltema, N. van der Wal, and D. Holwerda, 17 vols. (Groningen, 1953–88), 15.1.39.

⁹ “Βίος καὶ πολιτεία τοῦ Ὁσίου πατρὸς ἡμῶν Γερμανοῦ,” *AASS*, May 3:10; see also Moutsopoulos, *Καστοριά*, 445–47.

¹⁰ I. Tsiknoropoulos, *Κυπριακά Τυπικά* (Nicosia, 1969), 89–90. The same recommendation is made by Kekaumenos (*Στρατηγικόν*, ed. D. Tsoungarakis [Athens, 1993], chap. 52, p. 175): “If you are poor, do not attempt to build, lest you fall into sin, and change your purpose.”

¹¹ In accordance with the provisions of the *Basilics*.

¹² C. Bouras, *Ἱστορία τῆς ἀρχιτεκτονικῆς*, 2 vols. (Athens, 1994), 2:192–93.

¹³ Extreme examples of this were the church of the Peribleptos, founded by Romanos III Argyros, and St. George of Mangana, founded by Constantine IX Monomachos. See, in this respect, *Michel Psellos, Chronographie*, ed. E. Renauld, 2 vols. (Paris, 1967), 1:41–43, chap. 3.14 and 2:61–63, chap. 6.186, respectively.

¹⁴ See N. Asgari, *Objets de marbre finis, semi finis et inachevés du Proconnèse, Pierre éternelle du Nil au Rhin, Carrières et préfabrication* (Brussels, 1990), 106–26.

¹⁵ C. Mango, *Byzantium: The Empire of New Rome* (London, 1980), 261–62; J.-P. Sodini, “Remarques sur la sculpture architecturale d’Attique, de Béotie et du Peloponnèse,” *BCH* 101 (1977): 425ff; idem, “Marques de tâcherons inédites à Istanbul et en Grèce,” in *Artistes, artisans et production artistique au moyen âge*, ed. X. Barral i Altet, 2 vols. (Paris, 1986–87), 2:503–18; idem, “Le commerce des marbres à l’époque proto-byzantine,” in *Hommes et richesses dans l’empire byzantin*, 2 vols. (Paris, 1989–91), 1:163–86; cf. idem, “Marble and Stoneworking in Byzantium, Seventh–Fifteenth Centuries,” *EHB*.

¹⁶ J. Morganstern, *The Byzantine Church at Dereğzi and Its Decoration* (Tübingen, 1983), 132; A. H. S. Megaw, “Excavations on the Castle Site at Paphos, Cyprus, 1970–1971,” *DOP* 26 (1972): 335 n. 42, figs. 18 and 19.

Major public or imperial projects of a defensive, ecclesiastical, or other nature were constructed by the second method: after the materials had been assembled (συναγωγή τῆς ὕλης), craftsmen were hired by the day and implemented the project. The various items of work had to be coordinated, and the person responsible for liaison operations of this kind was usually a state official with experience of similar tasks and not the master craftsman. Here, too, we see a continuation of a tradition dating back to the time of Theodosios¹⁷ or Justinian.¹⁸ The names of quite a number of these supervisors of large projects are known to us from inscriptions and other sources: they include Theodore Velonas,¹⁹ Kakikis,²⁰ Vasileios Kladon,²¹ Fakoleatos, Astras and Peralta,²² Eustathios,²³ Roupenis Armenios,²⁴ and others. In the case of large-scale private projects, the supervisor for construction of the project, responsible for coordinating the work of the craftsmen, might be a secretary who enjoyed the confidence of the owner of the project.²⁵

As far as the building work sector is concerned, we do not know to whom the means of production belonged in Byzantium. By “means of production” I mean, on the one hand, the simple tools of the craftsmen (hammers, saws, drills, T squares, spirit levels, planes,²⁶ pack saddles,²⁷ and the tools of masons, including trowels, picks, and hods) and, on the other, the building site equipment, which a number of craftsmen would have used together (scaffolding, ladders, pulleys, ropes, winches, cranes, primitive cement mixers,²⁸ and so on). The appearance of these tools, often unchanged to the

¹⁷ Examples being those of Cyrus, who built the walls of Constantinople (according to Theophanes, *Chronographia*, ed. C. de Boor, 2 vols. [Leipzig, 1883–85], 1:96, 97 (hereafter Theophanes), and of Hormisdas in Thessalonike (O. Tafrali, *Topographie de Thessalonique* [Paris, 1913], 33ff).

¹⁸ As in the case of Victorinos, who fortified the Isthmus of Corinth and Byllis in north Epiros: S. Anamali, “Katēr Mbishkrime udērtimi nga Bylisi,” *Monumentet* 33 (1987): 62–73 nn. 7–12.

¹⁹ Who built a church in Chalcedon, according to *Theophanes Continuatus*: A. Markopoulos, “Le témoignage de Vaticanus gr. 163 pour la période entre 945–963,” *Σύμμεικτα* 3 (1977): 4–25, and O. Demus, *The Church of San Marco* (Washington, D.C., 1960), 91.

²⁰ Who in 862 repaired the fortifications of Thessalonike: E. Marki, *Δεύτερο Συμπόσιο Χριστιανικῆς Ἀρχαιολογικῆς Ἑταιρείας* (Athens, 1982), 55–56.

²¹ Who repaired the walls of Kavala: see S. Kyriakides, *Βυζαντινὰ Μελέται* (Thessalonike, 1939), 134.

²² Who, according to Kantakouzenos, repaired the domes of Hagia Sophia: *Ioannis Cantacuzeni Historiarum libri quattuor*, ed. L. Schopen, 3 vols. (Bonn, 1828–32), 3:29–30 (hereafter Kantakouzenos).

²³ A *droungarios* who built a settlement for Alexios Komnenos: *Anne Comnène*, Alexiade, ed. B. Leib, 3 vols. (Paris, 1937–45), 2:71.

²⁴ Who, according to Kedrenos, repaired the walls of Thermopylae in the reign of Basil II: Georgius Cedrenus, *Σύνοψις Ἱστοριῶν*, 2 vols. ed. I. Bekker (Bonn, 1838–39), 2:435.

²⁵ Such as Michael Grammatikos, who supervised the construction of the monastery of the Kosmosoteira: see L. Petit, “Typikon du monastère de Kosmosotira près d’Aenos (1152),” *IRAIK* 13 (1908): 69.

²⁶ See Ch. du Cange, *Glossarium ad scriptores mediae et infimae Graecitatis* (Lyons, 1688; repr. Graz, 1958), 1307, s.v. ρουκάνη.

²⁷ See PG 4:140.

²⁸ There is no testimony to such equipment in Byzantium, but it is reported in western Europe and Georgia in the period from the 10th to the 12th centuries: see Barral i Altet, *Artistes, artisans et*

present day, can be recognized in their depictions in miniatures, wall paintings, and mosaics.²⁹ If the project was undertaken by a contractor, it is reasonable to assume that this essential equipment would have belonged to him.

In the case of major public projects, however, the site equipment would have been so costly that it can only have belonged to the state itself. Characteristic is the following piece of information from the accounts relating to the repairs on Hagia Sophia in Constantinople in 995: "Just for the lifting machinery on which the craftsmen stand and, receiving the materials hoisted up to them, rebuild the part of the structure that had collapsed, 10 kentenaria,"³⁰ that is, the cost totaled 1,000 litrai of gold. No study has yet been conducted of the relationship between the technology of war engines or shipbuilding and that of construction sites, possibly permitting the formation of hypotheses about the use of some of the same engines. It is apparent from indirect references that the Byzantine monasteries possessed their own equipment, at least as far as tools were concerned: the severe penances specified by Theodore of Stoudios³¹ are testimony to his concern that the mason's tools belonging to the monastery should be looked after carefully and maintained.

In the Byzantine period, unlike classical antiquity, we have no information as to the wages paid to craftsmen. Such wages differed in any case from place to place and in accordance with the craftsman's trade and the season of the year. Cyril Mango has investigated these wages and their purchasing power in early Christian times,³² but once again the information is of limited extent. The duration of the craftsman's working day is noted loosely in the *Hypotyposis* of St. Christodoulos of Patmos³³ as being "from dawn till dusk." The five-day week recorded by the same document was probably an exception caused by the living conditions peculiar to the island in the eleventh century.

As a result of our ignorance of the wages received by craftsmen and of their purchas-

production artistique au moyen âge (as above, note 15), 2:324 (P. Skubiszewski) and 321 (N. Thierry), respectively. Equipment of this kind was probably to be found in Byzantium, on the sites of large projects. Among similar machinery one could cite the kneading machine powered by animals and invented by St. Athanasios the Athonite: see L. Petit, "Vie de Saint Athanase l'Athonite," *AB* 25 (1906): 63.

²⁹ A. K. Orlandos, "Παραστάσεις εργαλείων τινών ξυλουργού μαρμαρογλύπτου καί κτίστου ἐπὶ παλαιοχριστιανικῶν καὶ βυζαντινῶν μνημείων," *Πεπραγμένα τοῦ Θ' διεθνoῦς βυζαντινολογικοῦ συνεδρίου* (Athens, 1954), 1:329–39, figs. 57–63; A. Louvi-Kizi, "Ἡ βυζαντινὴ τέχνη ὡς πηγή γιὰ τὴν μεσαιωνικὴν τεχνικὴν," *Ἐθνογραφικά* 6 (1989): 115–20.

³⁰ εἰς μόνας τὰς μηχανὰς τῆς ἀνόδου, δι' ὧν οἱ τεχνῖται ἰστάμενοι καὶ τὰς ὕλας ἀναγομένας δεχόμενοι ὠκοδόμουν τὸ πεπτωκός, κεντηνάρια ι'." *Michaelis Glycae, Annales*, ed. I. Bekker (Bonn, 1836), 576 (hereafter Glykas).

³¹ "Θεοδώρου τοῦ Στουδίτου τὰ εὕρισκόμενα," PG 99:1744.

³² Mango, *Byzantium*, 40ff. In a case in which accounts were rendered for 200 gold pieces spent on the monastery of Bebaia Elpis (H. Delehaye, "Deux typica byzantins de l'époque des Paléologues," *Mémoires de l'Académie Royale de Belgique* 13.4 [1921]: 104), things are equally unclear. See also in this respect, A. E. Laiou, "Στο Βυζάντιο των Παλαιολόγων. Οικονομικά και πολιτιστικά φαινόμενα," in *Εὐφρόσυνον. Ἀφιέρωμα στὸν Μανόλη Χατζηδάκη* (Athens, 1991), 1:392 n. 36.

³³ MM 6:68.

ing power, it is impossible to produce even an approximation (on the basis of the quantity of work of which we know modern craftsmen to be capable) of the percentage of the total cash investment in the specific monument represented by the value of human labor. We can be certain, however, that the craftsmen of Constantinople and the provinces would have been paid in cash and not in kind.³⁴

The production of architectural work also often involved the participation of unpaid persons. These might be monks building their own monastery, or the enthusiastic founders of churches and monasteries who were later proclaimed to be persons of special sanctity (*hosioi*). The written sources, and the hagiographical texts in particular, contain a considerable amount of indirect information about the role these people played in construction, whether as organizers and supervisors³⁵ or in other cases as mere manual laborers.³⁶ The best-known example is that of St. Athanasios the Athonite,³⁷ who in fact died when the *katholikon* of the monastery of the Great Lavra collapsed as it was being built,³⁸ possibly in 1001. Other famous anchorites of the Greek world were also known for their enthusiasm as builders,³⁹ including Hosios Nikon the Metanoieite,⁴⁰ Hosios Euthymios the Younger,⁴¹ St. Germanos,⁴² Hosios Meletios,⁴³ and St. Paul of Mount Latmos.⁴⁴

The written sources also mention the names of ordinary monks who were builders: Daniel⁴⁵ was among those killed in the accident at Lavra; there was also a Master Gregorios⁴⁶ at Lavra, though it is unclear whether he was a craftsman; at Vatopedi an inscription gives the name of one Methodios,⁴⁷ and another at Docheiariou refers to "Theodoulos, craftsman in building" (Θεόδουλος τεχνίτης εἰς τὴν κτιστικὴν),⁴⁸ at Pantokrator monastery in the Meteora we find a reference to Serapion, monk and mason;⁴⁹ Iakovos⁵⁰ is mentioned at the Tsipiana monastery, and in distant Russia lived

³⁴ N. Oikonomides, "Σε ποῖό βαθμό ἦταν ἐκχρηματισμένη ἡ μεσοβυζαντινὴ οἰκονομία"; in Ροδωνιά, τιμὴ στὸν Μ. Ι. Μανούσακα (Rethymnon, 1994), 363–71.

³⁵ As in the case of St. Sabas in Morača, 1251–52: see S. Petković, *Morača* (Belgrade, 1986), figs. 51–52.

³⁶ Stone carrying for the building of the monastery by St. Paul, for the purpose of asceticism and against sleep: see T. Wiegand, "Der Latmos," *Milet* 3.1 (1913): 108, 138.

³⁷ See Petit, "Vie de Saint Athanase," 33–38.

³⁸ *Ibid.*, 76–77.

³⁹ According to Orlandos: see 'Αρχ.Βυζ.Μνημ. Έλλ. 5 (1939–40): 39.

⁴⁰ Sp. Lambros, "Ο βίος Νίκωνος τοῦ Μετανοεῖτε," *Νέος Έλλ.* 3.2 (1906): 152, 153, 164, 170, 171, 193.

⁴¹ L. Petit, "Vie et office de Saint Euthyme le jeune," *ROC* 8 (1903): 168–205.

⁴² "Βίος καὶ πολιτεία τοῦ Ὁσίου πατρός ἡμῶν Γερμανοῦ," *AASS*, May 3:10ff.

⁴³ Βίος τοῦ Ὁσίου πατρός ἡμῶν Μελετίου, ed. C. Papadopoulos (Athens, 1968), 43, 51–53.

⁴⁴ Wiegand, "Der Latmos."

⁴⁵ Petit, "Vie de Saint Athanase," 76; K. Doukakis, *Μέγας Συναξαριστής* (Athens, 1983), 67.

⁴⁶ P. Meyer, *Die Haupturkunden für die Geschichte der Athosklöster* (Leipzig, 1894), 130.

⁴⁷ G. Millet, J. Pargoire, and L. Petit, *Recueil des inscriptions chrétiennes de l'Athos* (Paris, 1904), 15.

⁴⁸ Δαμασκηνοῦ τοῦ ὑποδιακόνου καὶ Στουδίτου Θησαυρός (Venice, 1581), 201.

⁴⁹ P. Uspenskii, *Puteshestvie v Meteorskie i Osoolimpitskie Monastyri v Fessalii* (St. Petersburg, 1896), 408–9.

⁵⁰ Y. Lambakis, "Περιηγήσεις ἡμῶν ἀνὰ τὴν Ἑλλάδα," *Δελτ.Χριστ. Αρχ.* Έτ. 3 (1902): 24–25, and N. Moutsopoulos, "Αἱ παρὰ τὴν Τρίπολιν μοναὶ Γοργοπηκόου, Βαρσῶν καὶ Ἐπάνω Χρέπας," *ΕΕΒΣ* 29 (1959): 400.

a certain Ioannikios, monk and builder.⁵¹ We can assume that there would have been many more of these monk-builders, members of monastic communities, who provided their services as craftsmen free of charge. A comparison with the building activities of the monks of the West during the same period lies, of course, outside the scope of this discussion.

Forced or *corvée* labor, the institution by which citizens were obliged to offer their services to the state or some other authority, does not seem to have been implemented in Byzantium where building work was concerned,⁵² with the exception of emergencies in which towns or positions had to be fortified rapidly or have their walls repaired.⁵³ What was called *kastroktisia* (construction of fortresses) had the same purpose but was a fiscal charge.⁵⁴ One known instance of the construction of fortifications by *corvée* labor is that related by Kantakouzenos,⁵⁵ in which Stefan IV Dušan compelled ten thousand people to take part in building the walls of Berroia.

Sailors from the imperial fleet were also likely to find themselves being used on major construction projects. Their experience in the handling of winches and pulleys and in lifting heavy weights would certainly have contributed to their suitability for work on the building sites for large projects. The sources tell us, however, that the employment of ships' crews on construction work also had another purpose: "so as to prevent the mob of sailors from becoming more disorderly through idleness."⁵⁶ The best-known examples of the use of sailors are the construction by Nikephoros Phokas of the church of the Theotokos in Crete⁵⁷ and of the Nea Ekklesia in Constantinople in the reign of Basil I,⁵⁸ the latter being said to have been the cause of serious losses during the war at sea against the Arabs.⁵⁹ The use of prisoners of war for work on building projects, including some of the most elaborate, as some scholars have hypothesized,⁶⁰ is not documented by the texts and would not appear to be borne out by the facts.

⁵¹ B. Latschew, *Bulletin de la commission Impériale archéologique* 14 (1905): 132, no. 5; see also N. Bees, "Πεντήκοντα χριστιανικῶν καὶ βυζαντινῶν ἐπιγραφῶν νέαι ἀναγνώσεις," *Ἀρχ. Ἐφ.* (1911): 107.

⁵² M. Bartusis, "Corvée," *ODB* 536.

⁵³ A. Stavridou-Zafra, "Ἡ ἀγγαρεία στό βυζάντιο," *Byzantina* 11 (1982): 22ff, and esp. 32 n. 69, where various examples are given.

⁵⁴ S. Trojanos, "Καστροκτησία: Einige Bemerkungen über die finanziellen Grundlagen des Festungbaues im byzantinischen Reich," *Byzantina* 1 (1969): 41–57.

⁵⁵ Kantakouzenos, 3:124.21–24.

⁵⁶ ὥς ἂν μὴ σχολάζων ὁ ναυτικὸς ὄχλος ἀτακτότερος γένοιτο: *Theophanes Continuatus*, ed. I. Bekker (Bonn, 1838), 308.

⁵⁷ The church was visited approximately a century after its foundation by Michael Attaleiates, who preserves the obviously mistaken assertion that it was built in three days, presumably in order to refer to the large number of sailors from the fleet: "and of the craftsmen in the ships and of working hands to be numbered in tens of thousands" (καὶ πολλῶν ὄντων τεχνιτῶν ἐν τοῖς πλοίοις καὶ χειρῶν ἐν μυριάσιν ἀριθμουμένων). See *Michaelis Attalioe Historia*, ed. I. Bekker (Bonn, 1858), 226. See also N. Panagiotakis, *Θεοδόσιος Διάκονος καὶ τὸ ποίημα αὐτοῦ Ἀλώσις τῆς Κρήτης* (Herakleion, 1960), 37, 38 n. 103.

⁵⁸ *Theophanes Continuatus*, 843.

⁵⁹ *Ioannis Zonarae Epitome historiarum*, ed. T. Buttner-Wobst (Bonn, 1841–97), 3:432 (hereafter Zonaras).

⁶⁰ G. Sotiriou, "Αραβικαὶ διακοσμήσεις εἰς τὰ βυζαντινὰ μνημεῖα τῆς Ἑλλάδος," *Πρακτικά Χριστιανικῆς Ἀρχαιολογικῆς Ἑταιρείας* (1933): 88–89.

The craftsmen of Byzantium belonged to the lower social class. The physical punishments provided for in the *Book of the Eparch*⁶¹ confirm this. The conduct toward the craftsmen of a supervisor named Stephanos,⁶² when palace buildings were being erected around 700, is characteristic. There were also cases of builders who were *paroikoi* (dependent peasants), such as Eustathios of the Great Lavra.⁶³ The craftsmen of Byzantium, whatever their trade, worked to make a living and not for the joy of creative activity, and this was particularly true of construction workers, whose jobs were tiring and dangerous. It is no coincidence that, although amateur painters have been identified by name in Byzantium,⁶⁴ the same is not true of builders or master craftsmen.

It is clear that in the medieval mode of production there was no distinction between the design of the project and its execution,⁶⁵ and consequently the role of the architect, as we are familiar with it in classical antiquity and later during the Renaissance, was nonexistent. Much has been written about the gradual disappearance of the term *architect*, and of the special kind of education that architects received, during the late Roman and early Christian periods, both in Byzantium and in the West. Much has also been said about the shift at a later date, during the Renaissance, in the concept of the artist, which ceased to be that of a manual worker and became that of the creator by form. That discussion, however, lies outside the scope of this chapter.

Although Byzantine master craftsmen, like their contemporaries in the West, certainly had to solve a whole host of problems, they belonged to the guild or team of craftsmen and were not paid separately for designing the project. Their training was empirical and traditional, not theoretical. A knowledge of mathematics has always been decisive where theory is concerned. It is common knowledge that mathematics was at a low ebb during the middle Byzantine period, and very little progress was made during the time of the Palaiologoi.⁶⁶ Such knowledge as existed was certainly not available to the practitioners of architecture, who at best would know how to solve practical

⁶¹ See Koder, *Eparchenbuch*, 140: “while contractors who break their contracts are to be punished by beating and shaving of the head and banishment” (οἱ δὲ ἀθετήσαντες ἐργολάβοι διὰ δαρμού καὶ κουράς καὶ ἐξορίας σωφρονιζέσθωσαν).

⁶² Theophanes, 367: “and in order to urge them on he set over them Stephanos the Persian, his *sakellarios* and chief eunuch, a most bloodthirsty and cruel master and overlord, who did not confine himself to maltreating the laborers but stoned both them and their foremen” (καὶ ἐπέστησεν ἐπείκτην Στέφανον τὸν Πέρσην, σακελλάριον αὐτοῦ καὶ πρωτοεunuχον, κύριον καὶ ἐξουσιαστὴν λίαν ὄντα αἰμοβόρον καὶ ἀπηνῆ).

⁶³ Mentioned in a document of 974: *Actes de Lavra*, ed. P. Lemerle, A. Guillou, N. Svoronos, and D. Papachryssanthou, *Archives de l'Athos*, 4 vols. (Paris, 1970–81), 1:110 (doc. 6, line 17).

⁶⁴ N. Oikonomides, “L'artiste amateur à Byzance,” in Barral i Altet, *Artistes, artisans et production artistique au moyen âge*, 1:45–50.

⁶⁵ Perhaps the sole reference to a building as being “designed” is found in the Life of St. Ioannikios, *AASS*, Nov. 2, 1:407c.

⁶⁶ See H. Hunger, *Die hochsprachliche profane Literatur der Byzantiner* (Munich, 1978), 2:221–60; D. Pingree, “Mathematics,” *ODB*, 1313–14. For the practical applications of mathematics, see J. Lefort, “Géométrie et Géodesie,” *Abstracts of Short Papers, 17th International Byzantine Congress* (Washington, D.C., 1986), 191, and in particular, idem, “Le cadastre de Radolivos (1103): Les géomètres et leur mathématiques,” *TM* 8 (1981): 276–78, 285.

problems in geometry⁶⁷ or simple arithmetic. The only handbook of calculations containing problems connected with the organization of building projects to have come down to us dates from the period after the fall of Constantinople.⁶⁸ As for the professional training of master craftsmen, surveyors, agronomists, and other experts, our ignorance is complete.⁶⁹ No “scrapbooks” of sketches useful to craftsmen, of the kind known to us from western Europe,⁷⁰ have survived, and none are even mentioned in Byzantium in the period under discussion, although one can hypothesize that in some cases they must have existed.⁷¹

It is a feature of Byzantium that the names of builders and master craftsmen are not known to us. The few names that have survived have almost always done so by chance, since, precisely as was the case in the Middle Ages in the West,⁷² they were believed to be of much less importance than the names of donors, founders, supervisors, and, in general, those who had initiated the architectural project. In most cases, it is unclear whether the person stated to have “made” the project was the man who built it, who supervised it, or who financed it. Neither the unknown person from Chonai who claimed to have built a church in Asia Minor⁷³ nor the Gregorios of the Hosios Loukas monastery who stated that he constructed the marble revetment in the *katholikon* with his own hands⁷⁴ can be telling the exact truth, given the magnitude of the projects in question.⁷⁵ Other instances are equally uncertain, including the cathedral of Berroia,⁷⁶ the church of St. John in Messene,⁷⁷ the Porta Panagia near Trikala,⁷⁸ and all the cases in which the word μαῖστωρ (“master craftsman”) is used.⁷⁹ The word *maistor* (whence the modern Greek (μάστορας) is often used in Byzantium to refer to craftsmen, but it was also applied to other occupations when the speaker wished to refer to a man of skill, great experience, and the ability to pass his knowledge on to others.

Names of some of the craftsmen and master craftsmen of the period under discus-

⁶⁷ For a manual of practical geometry and stereometry, see N. Svoronos, “Recherches sur le cadastre byzantin et la fiscalité aux XIe et XIIe siècles: Le cadastre de Thebes,” *BCH* 83 (1959): 1ff.

⁶⁸ H. Hunger and K. Vogel, *Ein byzantinisches Rechenbuch des 15. Jahrhunderts* (Vienna, 1963). It contains one hundred exercises in calculating materials and labor costs from Cod. Vindobonensis Phil. gr. 65.

⁶⁹ P. Lemerle, *Le premier humanisme byzantin* (Paris, 1971), 261.

⁷⁰ Such as that of Villard de Honnecourt.

⁷¹ See A. H. S. Megaw, “Background Architecture in the Lagoudera Frescoes,” *JÖB* 21 (1972): 198; V. Lazarev, *Old Russian Murals and Mosaics* (London, 1966), 14ff, 27ff.

⁷² N. Pevsner, “The Term Architect in the Middle Ages,” *Speculum* 18 (1942): 553.

⁷³ K. Kourouniotis, “Τὸ ἔργον τῆς ἐλληνικῆς Ἀρχαιολογικῆς Ὑπηρεσίας ἐν Μικρᾷ Ἀσίᾳ,” *ΑΔ* 7 (1921–22): app., p. 4. The church was a large one, ornamented with marble sculptures.

⁷⁴ R. Schultz and S. H. Barnsley, *The Monastery of St. Luke of Stiris* (London, 1901), 28.

⁷⁵ M. Chatzidakis, “A propos de la date et du fondateur de Saint-Luc,” *CahArch* 19 (1969): 141 n. 36.

⁷⁶ T. Papazotos, “Η κτητορική ἐπιγραφή τῆς παλιᾶς μητρόπολης Βεροίας,” *Historikogeographika* 1 (1986): 200.

⁷⁷ A. Orlandos, “Ἐκ τῆς χρῆστῆς Μεσσηνίας,” *Ἀρχ.Βυζ.Μνημ.* Ἑλλ. 11 (1969): 124–26.

⁷⁸ A. Orlandos, “Ἡ Πόρτα Παναγία τῆς Θεσσαλίας,” *Ἀρχ.Βυζ.Μνημ.* Ἑλλ. 1 (1935): 39, fig. 27.

⁷⁹ As in the case, e.g., of the Tokalı Kilise. See A. W. Epstein, *Tokalı Kilise: Tenth-Century Metropolitan Art in Byzantine Cappadocia*, (Washington, D.C., 1986), 78, no. 1. It is also used to describe Gregorios of Lavra, already mentioned.

sion are: Nikephoros, who built the church of Christ Pantokrator in Constantinople⁸⁰ and emerged as the “Besaleel”⁸¹ of the entire project; Michael Kolokyntes, who “crafted” the church of St. John Kalyvites⁸² in Euboea; and the builders Sergios⁸³ and Demetras,⁸⁴ whose prestige was such that they witnessed official acts of donation and sale, respectively. Names of craftsmen are encountered in twos or threes, as in the cases of Nikolaos, Theodoros, and Ioannes at Arkasades in Lakonia,⁸⁵ Tobias, Akakios, and Paulos at Abydos,⁸⁶ and Ioannes and Kosmas at Burgaz.⁸⁷ We also have the names of some marble masons, including Vasilis, Vardas, and Ioannes at Tralles in Asia Minor,⁸⁸ George at Frangoulia in the Mani,⁸⁹ and the Niketas who put his name to at least four works of sculpture,⁹⁰ also in the Mani.

In the repetition of the name of that marble mason, one can perhaps detect the craftsman’s pride in his work and one of the rare Byzantine instances of self-advertisement on the part of a member of the lower class. This also applies to the builder Theophylaktos, who went so far as to mention his birthplace in an inscription at Ligourio.⁹¹ This phenomenon reappears late in the Palaiologan period, with the two Greek master craftsmen, both called Constantine, who constructed important fortifications and other works for the Gattilusi family⁹² and for the Knights of St. John of Rhodes.⁹³ In these last cases, however, we ought perhaps to see the impact of the enhancement in the role of the master craftsman that had taken place in the West in the late Gothic period. None of this gainsays my original statement as to the namelessness of Byzantine building activities. For a period of seven centuries and given the size of the empire, we have very few names indeed; more importantly, they are rarely connected with specific monuments, and we know nothing whatever about the personalities of those who bore them.

It does not seem necessary to reiterate here the terminology for the special skills of

⁸⁰ See G. Moravcsik, “Szent Laszló leánya és a Bizánci Pantokrator Monostor,” *Mitteilungen der Ungarischen Wissenschaftlichen Institut in Konstantinopel* 7–8 (1923): 43–47; Mango, *Architecture*, 24 n. 14.

⁸¹ Besaleel was the architect of the tabernacle, according to the Old Testament (Exodus 31:1–5).

⁸² Archimandrite I. Liapis, *Μεσαιωνικά μνημεία Εύβοίας* (Athens, 1971), 28.

⁸³ E. Vranousi, “Δύο ανέκδοτα ἀφιερωτήρια ἔγγραφα ὑπὲρ τῆς μονῆς τῆς Θεοτόκου τῶν Κριβιτζῶν,” *Σύμμεικτα* 4 (1981): 29–30.

⁸⁴ Lemerle, *Lavra*, 1:91 (doc. 1).

⁸⁵ D. Feissel and A. Philippides-Braat, “Inventaires en vue d’un recueil des inscriptions historiques de Byzance,” *TM* 9 (1985): 320–21.

⁸⁶ Grégoire, *Inscriptions grecques-chrétiennes*, 1:5, no. 5.

⁸⁷ *Ibid.*, 44, no. 117.

⁸⁸ *Ibid.*, 127, no. 347b.

⁸⁹ Feissel and Philippides-Braat, “Inventaires,” 306–7.

⁹⁰ N. Drandakis, “Νικήτας μαρμαρᾶς,” *Δωδώνη* 1 (1972): 21–44, pls. I–XVI.

⁹¹ Ch. Bouras, “Ο Ἅγιος Ἰωάννης ὁ Ἐλεήμων Λιγουριοῦ Ἀργολίδος,” *Δελτ.Χριστ.Ἀρχ.Ἐτ.* 7 (1973–74): 26.

⁹² Konstantinos the master craftsman built two churches in Ainos, two towers on Samothrace, and one tower on Thasos. See F. W. Hasluck, “Monuments of the Gattilusi,” *BSA* 15 (1908–9): 248–69, and A. Conze, *Reise auf den Inseln des Thrakischen Meeres* (Hanover, 1960), 54–55.

⁹³ Konstantinos Manolis, or Manolis Kountis (?), built the walls of Rhodes. See A. Gabriel, *La cité de Rhodes* (Paris, 1921), 1:98, no. 57.

craftsmen involved in the building trade, as listed in the *Book of the Eparch* and studied by Ph. Koukoules,⁹⁴ L. Robert,⁹⁵ and others. The church honored manual labor, basing itself on St. Paul's words in Acts 20. Thus the capacities of craftsman and clergyman were not seen as incompatible,⁹⁶ and we have an instance of a priest who was also a building worker.⁹⁷ In the letter from Michael Choniates to Patriarch Theodosios, we find a learned man's praise for manual labor.⁹⁸

Speros Vryonis has made a systematic investigation of the involvement of the guilds or teams of craftsmen in the political activities of eleventh-century Constantinople.⁹⁹ During the lengthy conflict between the political (or bureaucratic) aristocracy and that of the military, the role of both the clergy and the *banausoi*¹⁰⁰ (i.e., the people of the marketplace and of the crafts in general) seems to have been important, given that some emperors strove to keep themselves in power by relying on this class. Constantine X Doukas, for example, permitted them to become members of the senate, and Nikephoros III Botaneiates planned his ascent to the imperial throne with the support of the working people, that is, of the men of the market and the *banausoi*. Unfortunately, we have no information about the participation in this ephemeral Byzantine "democracy"¹⁰¹ of craftsmen from the building trades, just as we do not know whether during the uprisings of the period they put forward claims relating to their own particular interests.

We have already noted the mobility of craftsmen during the Byzantine period. It was only natural that laborers and craftsmen should move away from areas that were lacking in primary production to the urban centers or to large-scale projects where there were jobs to be had. There are many examples of this phenomenon in the early Christian era,¹⁰² and Prokopios tells us that under Justinian "the Emperor, disregarding all questions of expense, eagerly pressed on to begin the work of construction, and began to gather all the artisans from the whole world"¹⁰³; the reference is to the construction of Hagia Sophia. Later, during the medieval period, craftsmen moved around the

⁹⁴ Ph. Koukoules, *Βυζαντινῶν βίος καὶ πολιτισμός*, 6 vols. (Athens, 1948–57), 2.1:200–201, 207–8, 212–13.

⁹⁵ L. Robert, "Noms de métiers dans des documents byzantins," in *Χαριστήριον εἰς Ἀ. Κ. Ὁρλάνδον* (Athens, 1965), 324–47.

⁹⁶ E. Papayanni, "Ἐπιτρεπόμενες καὶ ἀπαγορευμένες κοσμικὲς ἐνασχολήσεις τοῦ βυζαντινοῦ κλήρου," in *Δ' Πανελληνιὸ Ἱστορικὸ Συνέδριο, Πρακτικά* (Thessalonike, 1983), 146–66.

⁹⁷ MM 2:488–90 (the case of the priest Gavras, 1401).

⁹⁸ *Michaelis Acominati Opera*, ed. S. Lambros (Athens, 1878–80), 2:48, line 15.

⁹⁹ S. Vryonis, Jr., "Byzantine Δημοκρατία and the Guilds in the Eleventh Century," *DOP* 17 (1963): 287–314.

¹⁰⁰ For the definition of the *banausoi* by Theodore of Stoudios, see PG 99:273; see also Koukoules, *Βίος*, 220–23.

¹⁰¹ For this term, see Vryonis, "Guilds," 291 n. 8.

¹⁰² Mango, *Architecture*, 24, 26–28; idem, "Isaurian Builders," in *Polychronion: Festschrift Franz Dölger zum 75. Geburtstag*, ed. P. Wirth (Heidelberg, 1966), 358–65.

¹⁰³ Prokopios, *De aed.*, 1.1.23: "Ὁ μὲν οὖν βασιλεὺς ἀφροντιστήσας χρημάτων ἀπάντων ἐς τὴν οἰκοδομὴν σπουδῇ ἔειτο, καὶ τοὺς τεχνίτας ἐκ πάσης γῆς ἤγειρεν ἅπαντας." English translation from the Loeb edition, *Procopius* (London, 1965), 7:11.

Byzantine Empire as frequently as their counterparts in the West.¹⁰⁴ A very well known reference in the *Chronicle* of Theophanes tells us that Constantine V summoned skilled craftsmen from all the provinces of the empire to repair the Aqueduct of Valens¹⁰⁵ in Constantinople in 766.¹⁰⁶

There are other examples of the movement of master craftsmen and craftsmen within the frontiers of the empire that might be mentioned here: from Constantinople to Chios to construct the Nea Moni;¹⁰⁷ from Monemvasia to Kythera for the repairs to the church of St. Demetrios;¹⁰⁸ from Kea to Ligourio for St. John Eleemon;¹⁰⁹ from Paros to Magoula in Lakonia;¹¹⁰ from Rhodes to Crete;¹¹¹ from various parts of the empire to the monastery of the Great Lavra¹¹² and to Xanthos in Lycia;¹¹³ and from Thebes to Athens.¹¹⁴

The movements of Byzantine master craftsmen and craftsmen outside the boundaries of the empire are perhaps of greater interest for the historians of art and architecture: master craftsmen from Constantinople worked at the Holy Sepulcher in the time of Constantine IX Monomachos;¹¹⁵ the master craftsman Nicholas built Our Lady Ljeviska at Prizren;¹¹⁶ and another craftsman, whose name has not survived, built the basilica of San Marco in Venice.¹¹⁷ A team of Byzantine craftsmen worked at Monte Cassino at the invitation of the Abbot Desiderius;¹¹⁸ and a certain Constantine, a marble mason, was employed by the cathedral of Monreale in Palermo.¹¹⁹ Although there is no confirmation of this in the written sources, we can be sure that the first churches

¹⁰⁴ K. J. Conant, *Carolingian and Romanesque Architecture, 800–1200* (Harmondsworth, 1974), 108. In medieval Serbia, all the major monuments of what is called the Raskja school were constructed by craftsmen from the Dalmatian coast who moved inland for the purpose. See V. Djurić, “Dubrovački graditelji u Srbiji srednjeg veka,” *Zbornik za Likovne Umetnosti Matice Srpske* 3 (Novi Sad, 1967): 85–106.

¹⁰⁵ Theophanes, I:440.

¹⁰⁶ G. Millet, *L'école grecque dans l'architecture byzantine* (Paris, 1916), 3; Choisy, *L'art*, 179; M. Chatzidakis, “Μεσοβυζαντινὴ τέχνη, 1071–1204,” in *Ἱστορία τοῦ Ἑλληνικοῦ Ἔθνους* (Athens, 1979), 9:394; Moutsopoulos, *Καστοριά*, 444.

¹⁰⁷ G. Foteinos, *Tà Neoμονήσια* (Chios, 1865), 42.

¹⁰⁸ “Χρονικόν Χειλά,” ed. C. Hopf, *Chroniques gréco-romanes* (Berlin, 1873), 346ff, no. XX.

¹⁰⁹ Chatzidakis, “Μεσοβυζαντινὴ τέχνη,” 394.

¹¹⁰ D. Drandakis, “Βυζαντινά καὶ μεταβυζαντινά μνημεῖα Λακωνικῆς,” *Ἀρχ. Ἐφ.* (1969): app., 10–11.

¹¹¹ G. Seferis, *Το βυσσινί τετράδιο* (Athens, 1987), 41, and commentary by F. Dimitrakopoulos, 106.

¹¹² According to the *typikon* of John Tsimiskēs; see P. Meyer, *Die Haupturkunden für die Geschichte der Athosklöster* (repr. Amsterdam, 1965), 129–30, 149.

¹¹³ J.-P. Sodini, “Une iconostase byzantine à Xanthos,” in *Actes du colloque sur la Lycie antique* (Paris, 1980), 148.

¹¹⁴ *Michaelis Acominati Opera*, 69.

¹¹⁵ R. Ousterhout, “The Byzantine Reconstruction of the Holy Sepulchre,” in *Abstracts of Short Papers, 17th International Byzantine Congress* (as above, note 66), 248; see also the complete text in the *Journal of the Society of Architectural Historians* 48 (1989): 66–78.

¹¹⁶ D. Panić and G. Babić, *Bogorodica, Ljeviska* (Belgrade, 1975).

¹¹⁷ Demus, *Church of San Marco* 89, 90, 100.

¹¹⁸ E. Müntz, “Les artistes byzantins dans l'Europe latine du Ve au XIe siècle,” *RArtChr* 4 (1893): 182, 183, 185; H. Bloch, “Monte Cassino, Byzantium and the West,” *DOP* 3 (1946): 166–230.

¹¹⁹ O. Demus, *The Mosaics of Norman Sicily* (New York, 1949), 102, 155 n. 97.

in Russia were built by craftsmen from Constantinople,¹²⁰ while by way of contrast the contribution made by Greeks to the building of monuments at Paderborn,¹²¹ at Pisa,¹²² and in Asia Minor after its conquest by the Seljuks¹²³ is clearly stated by the sources but is not confirmed by the style of the monuments in question.

We also have information about the presence of foreign master craftsmen and craftsmen in Byzantium as far back as the time of Justinian.¹²⁴ The story of Tiridates the Armenian, who repaired the domes of Hagia Sophia in Constantinople in the late tenth century, is particularly familiar.¹²⁵ Even so, neither at this date nor later, in the case of a church in Greece¹²⁶ built by an *ingegnere* of western origin and experience, can we discern any deviation from the architectural morphology and technique of Byzantium.¹²⁷ In the fourteenth century, the needs of accelerating development in the Venetian-occupied parts of the empire seem to have resulted in an influx of craftsmen from Italy.¹²⁸

I have already discussed the ways in which Byzantine buildings were designed and built, noting the lack of clarity in the distinction between the two processes and the dynamic manner in which both developed. Changes to the original plan and the deferment of solutions to the more serious problems seem to have been commonplace in medieval architecture, in the West as well as in Byzantium.¹²⁹ We can be sure that the economic impact of modifications and changes of plan and of the partial demolition required to achieve them would have been very considerable. Psellos has the following to say of the public money wasted on the construction of two imperial foundations in Constantinople, the Virgin Peribleptos¹³⁰ and St. George of Mangana, respectively: "all the royal treasure was opened, and all the golden streams flowed there; and, on the

¹²⁰ O. Powstenko, *The Cathedral of St. Sophia in Kiev* (New York, 1954), 34; H. Schäfer, "Architektur-historische Beziehungen zwischen Byzanz und der Kieven Rus'," *IstMitt* 23/24 (1973–74): 197–224.

¹²¹ Müntz, "Les artistes byzantins," 185; and K. Trypanis, "Ἡ ἐκκλησία τοῦ Ἁγίου Βαρθολομαίου ἐν Βεστωβάλια," *Ἑλληνικά* 9 (1936): 171–72.

¹²² R. Krautheimer, *Early Christian and Byzantine Architecture* (Harmondsworth, 1975), 351, 430; O. Demus, *Church of San Marco*, 97; S. Guyer, "Der Dom von Pisa und das Rätsel seiner Entstehung," *MünchJb* (1932): 352ff.

¹²³ S. Vryonis, *The Decline of Medieval Hellenism in Asia Minor* (Berkeley, 1971), 235, 236, 378, 389, 390.

¹²⁴ According to Kodinos, "Περὶ κτισμάτων" (PG 157:569), the church of St. Polyuktos in Constantinople was built "by craftsmen who had come from Rome."

¹²⁵ Asolik de Taron, *Histoire universelle*, ed. F. Macler (Paris, 1917), 133; K. L. Oganessian, *Zodehii Trdat* (Erevan, 1951), 87–89; P. Mylonas, "Ἡ ἐπισκευὴ τοῦ προύλλου τῆς Ἀγίας Σοφίας," *Ἀρχαιολογία* 32 (1989): 59–60.

¹²⁶ The church of the Transfiguration at Galaxidi, according to the *Χρονικόν τοῦ Γαλαξειδίου*, ed. K. N. Sathas (Athens, 1865), 197–200.

¹²⁷ P. Vokotopoulos, "Παρατηρήσεις στὸν ναὸ τοῦ Σωτῆρος κοντὰ στὸ Γαλαξειδί," *Δελτ.Χριστ.Ἀρχ.* Ἐτ. 17 (1993–94): 203 n. 13.

¹²⁸ F. Thiriet, *Délibérations des assemblées vénitiennes concernant la Romanie*, 2 vols. (Paris, 1966), 1:170, 176, 217; A. Laiou, "Quelques observations sur l'économie et la société de Crète vénitienne," *Bizancio e Italia: Raccolta di studi in memoria di Agostino Pertusi* (Milan, 1982), 177–98.

¹²⁹ R. Mainstone, "Structural Theory and Design before 1742," *Architectural Review* (April 1968): 305.

¹³⁰ See also Zonaras, 3:578–79.

one hand, all the sources were exhausted and, on the other, the church that was being built remained unfinished";¹³¹ and "the gold flowed from the public treasury like a stream bubbling up from inexhaustible springs."¹³² The dynamism of execution and the modifications can be identified in a study of the architectural monuments themselves, which display inexplicable joints, masonry of different kinds in different places, pilasters that support nothing, and so on. Among the examples that spring to mind are the Virgin Paregoritissa in Arta,¹³³ the Peribleptos church at Mistra,¹³⁴ and St. Demetrios at Kypseli in Thesprotia.¹³⁵

The fact that design was underplayed or even completely absent meant that in Byzantium a model had always to be pointed out to the master craftsman so that he could erect a similar building. Among instances of this are the Nea Moni of Chios,¹³⁶ the church of Sts. Carpus and Papyrus in Constantinople,¹³⁷ and the church built by Bishop Kyprianos in honor of St. Demetrios.¹³⁸ In reality, however, the copy was never a perfect one, because in medieval times it was impossible to survey the building or even arrive at a detailed description of it. On this question, the study by R. Krautheimer remains a classic.¹³⁹

The first stage in executing any architectural project was to assemble the materials needed, in particular the marble.¹⁴⁰ The problem of whether or not quarries operated in middle and late Byzantium will not detain us here,¹⁴¹ nor will we concern ourselves with the sources of other materials.¹⁴² However, we are constantly gaining a greater knowledge of the role played by the recycling of architectural material, especially of

¹³¹ Psellos, *Chronographia*, chap. 3.14, lines 20–23: πᾶς μὲν βασιλεῖος πρὸς τὸ ἔργον θησαυρὸς ἀνεῶ-
γνυτο, πᾶν δὲ χρυσὸν ἐκεῖ εἰσερχεῖτο ρεῦμα. Καὶ πᾶσαι μὲν ἐξηγντοῦντο πηγαί, ὁ δὲ οἰκοδομούμενος οὐκ
ἐξεπληροῦτο νεώς.

¹³² Ibid., chap. 6.185, lines 19–21: ὁ δὲ χρυσὸς ἀπὸ τῶν δημοσίων ταμειῶν, ὥσπερ ἐξ ἀφθόνων πηγῶν
καχλάζοντι ἐπέρρει τῷ ρεύματι. English translation by E. R. A. Sewter, *Fourteen Byzantine Rulers* (Har-
mondsworth, 1979), 251.

¹³³ G. Velenis, "Thirteenth-Century Architecture in the Despotate of Epirus," in *Studenica et l'art byzantin autour de l'année 1200*, ed. V. Korać (Belgrade, 1988), 280.

¹³⁴ G. Millet, *Monuments byzantins de Mistra* (Paris, 1910), pl. 28.2.b. There is no reason for the presence of the pilaster on the north wall.

¹³⁵ Unpublished.

¹³⁶ C. Bouras, *Ἡ Νέα Μονή της Χίου* (Athens, 1981), 141.

¹³⁷ W. Müller-Wiener, *Bildlexikon zur Topographie Istanbuls* (Tübingen, 1977), 186–87; the martyrium for the two saints was constructed along the lines of the Holy Sepulcher.

¹³⁸ P. Lemerle, *Les plus anciens recueils des miracles de Saint-Démétrius et la pénétration des Slaves dans les Balkans*, 2 vols. (Paris, 1979–81), 1:239.

¹³⁹ R. Krautheimer, "Introduction to an Iconography of Medieval Architecture," *JWarb* (1942): 1–33.

¹⁴⁰ Glykas (496) tells us that "it took seven years to assemble the materials" for the construction of Hagia Sophia.

¹⁴¹ Mango, *Architecture*, 22, 24; cf. Sodini, "Marble."

¹⁴² Of these materials, the most important were bricks and tiles. See K. Theodoridou, "Συμβολή στην μελέτη της παραγωγής οικοδομικών κεραμικών προϊόντων στα βυζαντινά καὶ μεταβυζαντινά χρόνια," *Δελτ.Χριστ.Ἀρχ.* Et. 13 (1985–86): 97–112.

the reuse of marble architectural members, in the economics, aesthetics,¹⁴³ and symbolism¹⁴⁴ of the monuments of the middle and late Byzantine periods.¹⁴⁵ Spolia were used even in the most important of the imperial foundations: in the Virgin of the Pharos, the filling slabs and abacuses were produced by sawing up a royal sarcophagus,¹⁴⁶ while in the church of Christ Pantokrator, also in Constantinople, many of the sculptures had been removed from the ruined church of St. Polyeuktos.¹⁴⁷ Architectural spolia were valuable items, particularly when they could be incorporated into a new building. We find them as merchandise,¹⁴⁸ spoils of war,¹⁴⁹ security for a loan,¹⁵⁰ dowry goods,¹⁵¹ and welcome donations.¹⁵² Old marble members could be reworked¹⁵³ so as to remove all trace of cracking caused by damage or adapt them for their new positions.

The question of the recycling of building material, with its financial implications, is directly connected with the attitude of the Byzantines toward the restoration of old ruins,¹⁵⁴ their reuse, and, in general, the conservation of the existing built environment. Characteristic here is the praise paid by Nikephoros Gregoras to Emperor Andronikos II, who maintained the old buildings and did not succumb to the vanity of constructing new ones.¹⁵⁵

The ways in which buildings were designed and constructed in Byzantine cities were subject, finally, to the building regulations. We know some of the provisions of these regulations from the *Nomoi* of an architect writing in the time of Julian of Ascalon (6th

¹⁴³ In connection with the spolia that were detached from buildings in Constantinople as ornamentation for new structures at Galatas, Gregoras comments on "the moving of the elegance from here to there" (ἡ τῆς ἐντεῦθεν χάριτος ἐκεῖσε μετάθεσις). See Laiou, "Στό Βυζάντιο τῶν Παλαιολόγων," 291.

¹⁴⁴ B. Brenk, "Spolia from Constantine to Charlemagne: Aesthetics versus Ideology," *DOP* 41 (1987): 108–9.

¹⁴⁵ Bouras, Ἱστορία τῆς ἀρχιτεκτονικῆς, 2:193. For the generalization of the phenomenon, see also G. Goodwin, "The Reuse of Marble in the Eastern Mediterranean in Mediaeval Times," *JRAS* (1977): 17–30.

¹⁴⁶ *Leonis Grammatici Chronographia*, ed. I. Bekker (Bonn, 1842), 248.23.

¹⁴⁷ R. Harrison, *Excavations at Saraghane in Istanbul*, vol. 1 (Princeton, N.J., 1986), 146, 147, 165, pl. 171.

¹⁴⁸ Laiou, "Στό Βυζάντιο τῶν Παλαιολόγων."

¹⁴⁹ Demus, *Church of San Marco*, 101–3.

¹⁵⁰ A. Laiou, "Venice as a Centre of Trade and of Artistic Production in the Thirteenth Century," *Il Medio Oriente e l'Occidente nell'arte del XIII secolo*, ed. H. Belting (Bologna, 1982), 15–16.

¹⁵¹ N. Banescu, "Un récit en grec vulgaire de la construction de Sainte Sophie," *EEBS* 3 (1926): 148 (eight columns from Marcia).

¹⁵² Βίος τοῦ Νίκωνος τοῦ Μετανοεῖτε, ed. Sp. Lambros, Νέος Ἑλλ. 3 (1906): 226 (the Malakinos donation, two columns).

¹⁵³ As they were in the *katholikon* of the Areia monastery (L. Bouras, Ὁ γλυπτός διάκοσμος τοῦ ναοῦ τῆς Παναγίας [Athens, 1960], 60, fig. 91), in the *katholikon* of the monastery of Xenophon (T. Pazaras, "Ὁ μαρμαρίνος διάκοσμος τοῦ παλαιοῦ καθολικοῦ τῆς μονῆς Ξενοφώντος," in 7ο Συμπόσιο Βυζαντινῆς καὶ Μεταβυζαντινῆς Ἀρχαιολογίας καὶ Τέχνης. Περιλήψεις ἀνακοινώσεων [Athens, 1987], 63–64), and, above all, in San Marco, Venice (F. Deichmann, *Corpus der Kapitelle der Kirche von S. Marco* [Wiesbaden, 1981], 8).

¹⁵⁴ C. Mango, "I bizantini e la conservazione dei monumenti," *Casabella* 581 (1991): 38–40.

¹⁵⁵ *Nicephori Gregorae Byzantina historia*, ed. L. Schopen (Bonn, 1829–55), 274–77.

century),¹⁵⁶ which were codified at a much later date by Constantine Harmenopoulos.¹⁵⁷ It remains questionable whether these provisions were actually implemented in the Byzantine provinces as well as in Constantinople, but the discussion of building legislation has only a slight and indirect connection with the subject of this chapter.

This initial approach to the questions surrounding craftsmen and their contribution to the building activity of Byzantium has served to indicate that certain important problems relating to the economic history of Byzantium are intractable. It does not seem that scholarly research will come up with answers in the near future to the very serious problems connected with capital investments in buildings, the percentage of the expenditure represented by labor costs, the productivity of the workers, and the income to be gained from cash investments in buildings across the entire period from the iconoclastic controversy to the fall of Constantinople. However, some statements can be made. Where the organization of production is concerned, we can contrast the differing modes of production involved in major public projects and smaller building works, and we can also be sure that the relative importance of the state and the mode of production represented by state investments differed from one period to the next. The combination of paid and unpaid labor is another significant factor and may have implications for other areas of concern. The mobility of the craftsmen is an indication—as far as the provinces are concerned, at least—of the existence of free organizations set up for specific occasions, as a kind of “company of colleagues,” rather than of guilds subject to state control.

¹⁵⁶ H. J. Scheltema, “The ‘Nomoi’ of Iulianus of Ascalon,” in *Symbolae ad jus et historiam antiquitatis C. van Oven dedicatae* (Leiden, 1946), 349–60.

¹⁵⁷ K. Harmenopoulos, *Πρόχειρον Νόμων ἢ Ἐξάβιβλος*, ed. K. G. Pitsakis (Athens, 1971), 114–15.

The Industries of Art

Anthony Cutler

The Nature of the Evidence

Broadly speaking, efforts to write the history of the industries of art in Byzantium have depended on two sorts of evidence: the literary sources and, only recently, the findings of archaeology. At least as regards the history of production, which is our present concern,¹ both these bodies of testimony are seriously flawed, though in different and even opposing ways: the texts, including the chroniclers and hagiographers, because neither their authors nor their audiences were much interested in the way what we call works of art came into being; at the same time the chroniclers concentrated almost exclusively on Constantinople. Even when a historian reports in some detail on a provincial monument, he typically ignores what would be useful to the economic historian. Thus Attaliates notes the domes, columns, doors, marbles, glittering mosaics, and precious metals of the church of the Virgin built during the siege of Chandax by Nikephoros Phokas in 961,² but says nothing of the cost or sources of these materials or of the origin or wages of those who worked them; his only quantitative datum is an improbable three days for the church's construction. Moreover, on the rare occasion when a text provides figures for a building or an artifact, for a variety of reasons it may be unreliable. Thus the late ninth- or tenth-century *Story of the Construction of Hagia Sophia* suggests that the huge sum of 45,200 pounds of gold was expended on the wages of its builders, even before the vaults were set in place, while its ambo alone cost 36,500 pounds of gold. We need put no faith in such numbers, for the writer's purpose was to criticize Justinian I's

¹ For the *consumption* of works of art, considered in a socioeconomic and cultural context, see A. Cutler, "Uses of Luxury: On the Function of Consumption and Symbolic Capital in Byzantine Culture," in *Byzance et les images: Cycle de conférences organisé au musée du Louvre par le service culturel du 5 octobre au 7 décembre 1992*, ed. A. Guillou and J. Durand (Paris, 1994), 287–327. Works frequently cited below include I. Andreescu-Treadgold, "The Mosaic Workshop at San Vitale," in *Mosaici a San Vitale e altri restauri: Il restauro in situ di mosaici parietali*, ed. A. M. Iannucci et al. (Ravenna, 1992), 30–41; J. Koder, ed., *Das Eparchenbuch Leons des Weisen* (Vienna, 1991); C. Mango, *The Art of the Byzantine Empire, 312–1453* (Englewood Cliffs, N.J., 1972); D. Winfield, "Middle and Later Byzantine Wall Painting Methods: A Comparative Study," *DOP* 22 (1968): 61–139.

² *Michaelis Attaliothae Historia*, ed. I. Bekker (Bonn, 1853), 228, lines 2–9.

prodigality and, by implication, that involved in Basil I's Nea Ekklesia.³ Again, unlike the documents of commission that we have from other cultures, those originating in Byzantium rarely specify the cost of an acquisition. The writer Manuel Raoul's request to the painter Gastreas for an icon of the Dormition of the Mother of God, written about 1360, offers as payment merely "the appropriate [fee]."⁴ Not only the prices paid for such end products but the wages of their producers and the circumstances in which they worked are normally ignored.

Byzantine field archaeology usually supplies even fewer specifics about the economic circumstances of individual artifacts. A discipline that has grown *pari passu* with concern for material culture, it has concentrated on things produced in quantity, for example, objects in stone, the base metals, ceramic, glass, and ordinary textiles. Such evidence, moreover, has come in the main from provincial sites, so that where the written sources tell us largely about the capital, the archaeological record tells us about what was widely made and widely used elsewhere. In other words, it focuses on commodities rather than luxuries; works of art, by any definition of the word, are largely excluded. This distinction may strike the reader as old fashioned (and even elitist), yet it receives support from the texts that we have, documents that celebrate the brilliance and rarity of materials far more often than they do the skill of the artificer, who, where he is mentioned at all in inscriptions on objects, is usually slighted.⁵ The value, if not the cost, of the product was seen to inhere in its physical splendor, and if anyone was considered its "producer" this was the individual who commissioned it, not the person(s) who made it. In Byzantium as in other premodern societies, the golden rule of artistic production was that he or she who had the gold set the rules.

Nonetheless, information about materials and the manner in which they were employed, about the practices of the artisans who employed them, their modes of organization, and the impact of these upon the results of their labor may be inferred from sources that are normally overlooked—the artifacts in their own right, documents that tell us more about the industries of art in Byzantium than either the written sources or the findings of archaeology. This evidence I present in diachronic sections devoted to the more important Byzantine crafts. Classification by medium may obscure the broader forces that affected artistic output. But it enables us to survey from the inside, as it were, the way in which conditions and methods of production varied in response to changing economic situations and the enduring demand for art that characterized

³ On this question, see G. Dagron, *Constantinople imaginaire* (Paris, 1984), 285–87. Less partisan texts may on occasion provide more dependable information, particularly concerning the origin of artifacts. Thus a higher degree of probability attaches to the report of Cyril of Skythopolis (*Kyrrillos von Skythopolis*, ed. E. Schwartz [Leipzig, 1939] 61, lines 23–24) that not only the silver urn (χώνη) for the ashes of St. Euthymios, but the railing around it and his tombstone had to be brought from outside, namely, from Alexandria. To this same city the neophyte Kyriakos was dispatched to buy altar cloths (ἀπλώματα) for the new *koinobion* at the site of Euthymios' lavra (ibid., 226, lines 1–3). Neither account reports the cost of the merchandise in question.

⁴ R.-J. Loenertz, "Emmanuelis Raul epistulae XII," *EEBE* 26 (1956): 162.

⁵ For two examples in ivory, see A. Cutler, *The Hand of the Master: Craftsmanship, Ivory and Society in Byzantium (9th–11th Centuries)* (Princeton, N.J., 1994), 158, 236.

this culture. Indeed, it is the very persistence of this demand that allows us to apply to Byzantium generally the role that Theodore Metochites assigned to objects of gold and silver: these, he claimed are “necessary to us, the rich and powerful, whose life is more brilliant than that of our compatriots, fellow citizens and poor people.”⁶

Wall Mosaics

The necessity of works in precious metal expressed by Metochites embodies a willingness to invest in expensive furnishings and an attitude toward conspicuous display that had a history as old as Byzantium itself. In this light, his decision to sheath with mosaic the interior of his church at the Chora monastery is no more surprising than the savings he achieved by limiting to fresco decoration the embellishment of the funerary chapel that he attached to this church. Both decisions rehearse millennial traditions, prompted by the sometimes competing needs of ostentation and economy.

In comparison with mural painting (see below), wall mosaic represents a major industry whether it is judged by the magnitude of the financial investment required, the many stages and the size of the labor force involved, or, at least in the fifth and sixth centuries, the vast geographical domain across which it found expression. In this last respect, its range of distribution was exceeded only by that of floor mosaic, an undertaking from which it differs radically in effect, technique, and the fineness of craftsmanship that it entailed. Unlike tessellated pavements, which had been widely used at pagan sites, wall mosaic became the medium par excellence for the adornment of monuments of the Christian faith. Supreme among surviving works is the huge body of aniconic decoration that Justinian I lavished on his rebuilding of Hagia Sophia in Constantinople, an enterprise summed up in Prokopios’ observation that “the entire ceiling has been overlaid with pure gold” (*De aed.* 1.1.26). In contrast to floor mosaics, where the works themselves often testify to the value of individual financial contributions to the overall program and the high cost of such undertakings that can be inferred from such records,⁷ neither any surviving wall mosaic nor any text supplies us with information as to the cost of embellishments of this sort. Yet reasonably reliable estimates of the expense involved can be made at least in terms of the materials employed. Concerning the sixth-century mosaics of the Great Church, Marlia Mango showed that some 9,925 m² of surface were covered with largely glass tesserae. Assuming an average 2.25 tesserae per cm² and a thickness of 2 microns for the precious-metal foil sandwiched in the cubes, she estimated that approximately 1,089 (Roman)

⁶ R. Guiland, “Le palais de Théodore Métochite,” *REG* 35 (1922): 88, lines 137–40.

⁷ E.g., for Italy, see J.-P. Caillet, *L'évergétisme monumental chrétien en Italie et à ses marges* (Rome, 1993), 451–65; for Greece, the figures cited by J.-P. Sodini, “L’organisation liturgique des églises en Palestine et Judée,” *The Roman and Byzantine Near East: Some Recent Archaeological Research*, *JRA*, suppl., 14 (Ann Arbor, Mich., 1995), 308–10. On the relation between the size of donations and the areas of mosaic that these bought, see P. Asemakopoulou-Atsaka, “Οι δωρητές στις ελληνικές αφιερωματικές επιγραφές του ανατολικού κράτους στην όψιμη αρχαιότητα,” in *Αρμος: Τιμητικός Τόμος στον καθηγητή Ν. Κ. Μουτσόπουλο για τα χρόνια πνευματικής του προσφοράς στο Πανεπιστήμιο*, 2 vols. (Thessalonike, 1990), 1:227–65, esp. 259–62.

pounds of gold were used.⁸ Using the same assumptions, I have suggested that in the second half of the ninth century an expanse of a little more than 2,000 m² was sheathed with tesserae (this includes the eastern semidome as a whole, the northeastern and southeastern exedrae, and the window soffits, but not the tympana on the north and south flanks of the church), while the apse mosaic alone took almost 13 pounds of gold.⁹ But there the comparison between the Justinianic campaign and that of Basil I must end, for many of the ninth-century tesserae were of stone, not glass; white marble was used instead of silver; blue-gray slate instead of blue glass; and terra-cotta cubes instead of red glass. The most telling contrasts occur in the tympana, sixth-century screens into which images of the church fathers were inserted in the 880s or possibly 890s. The Justinianic parts of these surfaces are lavish, to say the least: even the backgrounds of the arch reveals—hardly the most prominent parts of the decoration—were set entirely with gold mosaic. Not a single silver-capped tessera revealed itself to close inspection.¹⁰

Yet the presence of silver may serve as a better test than gold of the relative expenditure of the mosaics' sponsors. Its appearance is a function not of geography but of the metal's availability. Thus, if in the first half of the sixth century the silver in the mosaics at Lythrankomi in Cyprus was mined on that island, that used in the decorations of Thessalonike and Sinai could have come from Attica, Illyria, or even Armenia. The places where silver ores were found have less to do with its employment than with the metal's velocity in social exchange. What we do know is that in the mosaics set up after the early seventh-century fire at St. Demetrios in Thessalonike, white marble replaced silver;¹¹ a similar substitution was made in the chapel of Pope John VII (705–707) in the Vatican.¹²

The absence of silver tesserae noticeable in and after the seventh century must be distinguished from the limited availability of other colors. Already at San Vitale in Ravenna, as the craftsmen moved their scaffolding in the late 540s, they ran out of some of the materials they had used in the vaults above. Thus in the western arch, for example, the portraits in the apex are made almost entirely of glass, while lower down the frequency of stone cubes increased.¹³ Similar compromises appear in the apse at Lythrankomi in the same period (Fig. 1). Orange-vermilion glass was replaced by tesserae that, as in the case of Bartholomew in the lowest medallion on the south side, had been pigmented before insertion into the setting bed; bright red was obtained by

⁸ M. M. Mango in *Ecclesiastical Silver Plate in Sixth-Century Byzantium*, ed. S. A. Boyd and M. M. Mango (Washington, D.C., 1992), 125–26.

⁹ A. Cutler and J. Nesbitt, *L'arte bizantina e il suo pubblico* (Turin, 1986), 106.

¹⁰ C. Mango and E. J. W. Hawkins, "The Mosaic of St. Sophia at Istanbul: The Church Fathers in the North Tympanum," *DOP* 26 (1972): 7.

¹¹ J.-M. Spieser, *Thessalonique et ses monuments du IV^e au VI^e siècle* (Paris, 1984), 162 n. 33.

¹² P.-J. Nordhagen, "The Mosaics of John VII (A.D. 705–707)," *Acta ad archaeologiam et artium historiam pertinentia, Institutum Romanum Norvegiae* 2 (1965): 150–52.

¹³ Andreescu-Treadgold, "Mosaic Workshop," 38.



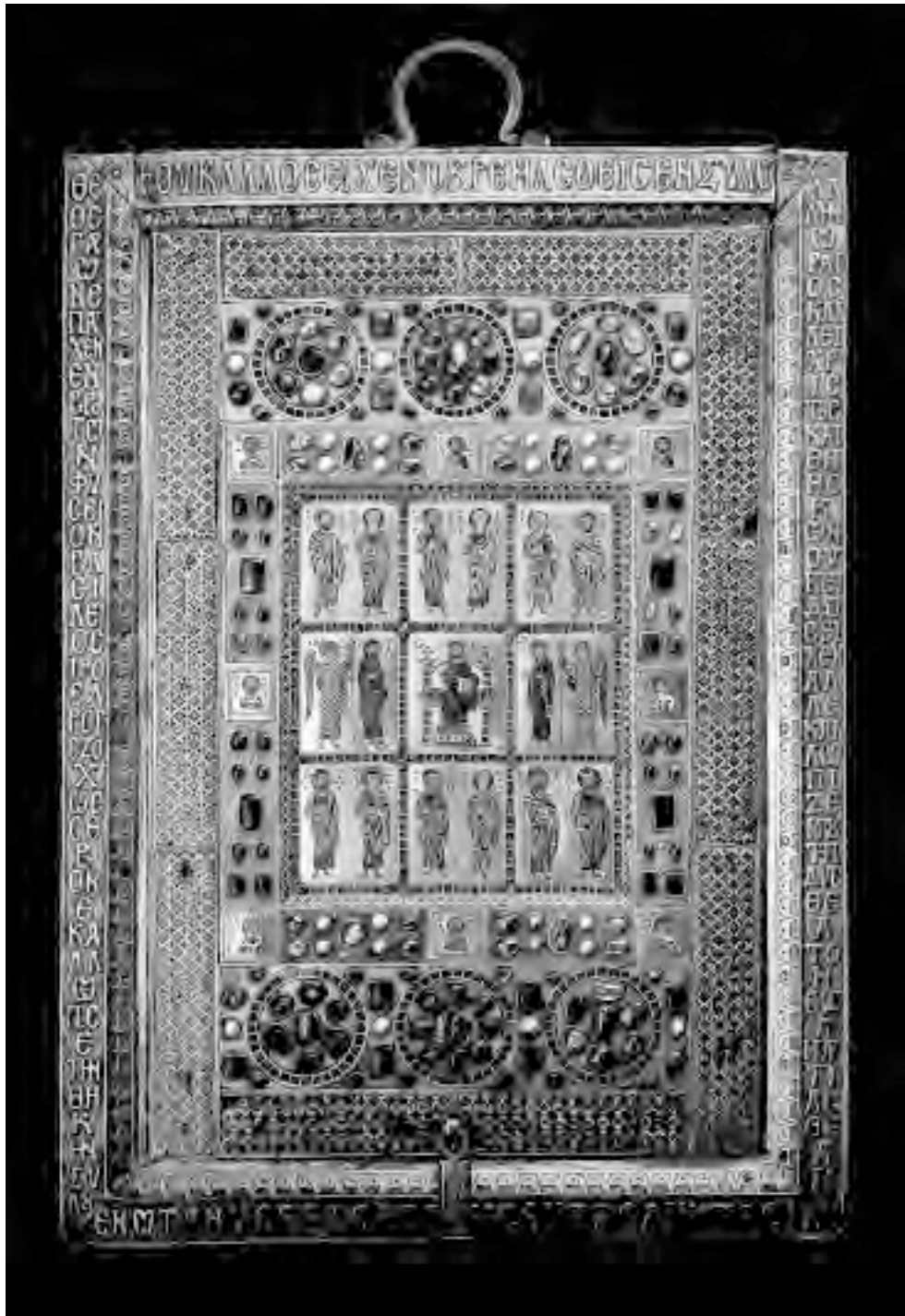
1. Mosaic, second quarter of the 6th century, Lythrankomi, Panagia Kanakaria, apse, south side (photo: Dumbarton Oaks)



2. Wall painting, 1192, Asinou, Panagia Phorbiotissa (photo: Dumbarton Oaks)



3. Mosaic icon, ca. 1200, Paris, Louvre. The Transfiguration
(photo: Réunion des Musées Nationaux)



4. Enamelled cross-reliquary, ca. 963, Limburg an-der-Lahn, Cathedral Treasury (photo: Art Resource, Inc.)



5. Bone and ivory casket, 10th–11th century, Dumbarton Oaks



6. Book illumination, second quarter of the 12th century, Melbourne, National Gallery of Victoria, ms. 710/5, fol. 1v (photo: National Gallery of Victoria)

dipping marble cubes in lead tetroxide.¹⁴ At Kiti, in the southern part of the island, red, black, and yellow were all created in this way instead of the translucent glass that is found elsewhere.

Now we must not think of these ersatz colors as in any way labor saving. In fact, the pigmentation of marble would have added another step to the process by which tesserae were produced, a stage necessitated on the one hand by a shortage of glass in the forty or more hues that are found in most sixth-century programs, and on the other by the desire to maintain a broadly polychrome palette. Both the production of tesserae and their subsequent setting were highly labor intensive. Much as bank notes depend upon an original design that is passed to a die cutter, whose work is then engraved and replicated before the resulting sheets can be printed and cut up, so cubes of glass or stone were the fruits of an industry that was geared to mass production. The difference between the two processes is that some of the tesserae used for the face of the Christ child at Lythrankomi, for instance, are as small as 4 mm square. On or below the scaffold the cubes had to be sorted not only by size, but by hue (since areas of color were created additively) and by material (since glass and stone offer different degrees of luminosity). Before cubes in any material could be set, a thick bed of lime plaster had to be laid up, often in three successive renderings in order to avoid the too rapid drying of the top layer into which the tesserae would be inserted. On this layer first a general layout and then a rough sketch of the final design would be painted, sometimes in three or four colors. These would serve not only as guidelines to be observed or not as the craftsman chose, but, where glass cubes were used, as bases that could affect the perceived color. Red *sinopie*, for example, still visible in the interstices between cubes, worked like the red bole that often underlay and enhanced the final gilding in manuscript illumination.

Depending on the size of the tesserae, the skill of the craftsman, and the care he exercised, a mosaicist could set up to 4 m² a day. Thus the decoration of an area like the conch of the apse of St. Sophia in Kiev has been estimated as requiring one month of labor for one man; a team of four might thus complete the task in about a week.¹⁵ Normally two mosaicists worked back-to-back on a scaffold.¹⁶ But their productivity depended, as we have seen, on that of a now-invisible industrial organization. It is no wonder, then, that mosaic decoration occurred in spurts, densely focused in terms of both space and time. In Ravenna, Julianus Argentarius' programs at San Vitale, Sant'Apollinare Nuovo, and the now-destroyed San Michele in Affricisco all went up at the same time; their mosaicists, it has been suggested,¹⁷ crossed town from one site to another, like construction workers or street pavers under contract to a modern city

¹⁴ A. H. S. Megaw and E. J. W. Hawkins, *The Church of Panagia Kanakaria at Lythrankomi in Cyprus: Its Mosaics and Frescoes* (Washington, D.C., 1977), 133–34.

¹⁵ H. Logvin, *Kiev's Hagia Sophia* (Kiev, 1971), 16.

¹⁶ Andreescu-Treadgold, "Mosaic Workshop," 37.

¹⁷ *Ibid.*

government. Another instance of such concentration is Constantinople in the 870s when Basil I commissioned *inter alia* mosaics in the eastern semidome, tympana, and the *sekreta* of Hagia Sophia, as we have seen, in the church of the Mother of God τῆς πηγῆς, in the Holy Apostles, the Kainourgion, and the “entire ceiling” (*Vita Bas.* 87) of the Nea Ekklesia. A similar if smaller cluster is represented by the mosaics of the church of the *basileopator* Stylianos Zaoutzes and that of his protégé Antony II Kauleas, made patriarch by Leo VI, both probably built in the 890s. But it is the decorations of the 870s that I wish to stress, if only because they have occasioned commentary that concerns, or should concern, the economic historian.

Regarding the substitutions for glass of marble, slate, and terra-cotta noted above, Cyril Mango and E. J. W. Hawkins pointed to the record in “Leo Grammatikos” (i.e., Symeon Logothete) that Basil removed mosaics from Justinian I’s mausoleum at the Apostoleion and reused them in the Nea. For this step, they adduced, surely correctly, a shortage of tesserae, which they explained in general terms as due to “economic factors.”¹⁸ It may be that we can be more specific and recognize here the crunch that ensued when difficulties in the production of glass tesserae—difficulties that I have already noted in the sixth and seventh centuries—coincided with the huge demand laid on the glass factories in this decade. It may be that such difficulties are responsible for both the perennial shortage of glass cubes and the prestige that therefore attached to mosaic decoration. Valuations of this sort underlay many of the diplomatic exchanges between Byzantines and Arabs, gifts that included the forty loads of tesserae sent from Constantinople for the Great Mosque of Cordoba.¹⁹ Now, given the industrial foundation of the craft that we have observed, it makes sense to suppose that mosaicists took with them the material that they needed rather than that they found it locally.²⁰ But the reciprocal relation between high price and high desirability could also mean that tesserae—durable goods capable of being shipped in infinitely divisible units of weight—were commodities that naturally recommended themselves to overseas merchants. To be available they had to be in actual production at the source. And such production was under way, as we know from Psellos, in the 1030s for the decoration of the Peribleptos monastery of Romanos III²¹ and for the same emperor’s mosaic in the south gallery of Hagia Sophia. It continued in the 1040s and 1050s for Constantine IX’s foundations of the Nea Mone on Chios and St. George in Mangana. We thus have

¹⁸ Mango and Hawkins, “Church Fathers,” 22.

¹⁹ As reported in the 12th century by al-Idrisi and later sources. See *La géographie d’Edrisi*, trans. P. A. Jaubert (Paris, 1840), 2:60.

²⁰ Nonetheless, tesserae from scattered sites (Shikmona in Israel, Hosios Loukas, and San Marco in Venice) that have been analyzed suggest considerable diversity of content, possibly indicating local manufacture. The evidence is summarized by L. James, *Light and Colour in Byzantine Art* (Oxford, 1966), 23–24. In theory, since the production of wall mosaic depends on glass and glass in turn on silicates—which are almost universally abundant in the form of sand, clay, and a host of common rocks—there is no technical reason, as opposed to reasons of economic organization, why tesserae could not have been locally produced.

²¹ Michel Psellos, *Chronographie*, ed. E. Renauld, 2 vols. (Paris, 1926–28), 1:41–43.

a mid-eleventh-century constellation of monuments each of them variously attributed to imperial piety or vanity. Could international trade have had any part in this picture? As is well known from the *Paterikon* of the Pecherskaia Lavra, founded in Kiev shortly after 1051, icon painters from the “God-guarded city of Constantinople” haggled with Nikon, its *hegoumenos*, over the size of the church that they had contracted to decorate. During the dispute the painters “brought many merchants, both Greek and Abkhazi, who had traveled with them . . . and they gave away the mosaic [cubes] which they had brought for sale, and it is with them that the holy chancel is now adorned.”²²

Another Kievan site, the already-mentioned cathedral of St. Sophia,²³ suggests by the reservation of mosaics to its naos and the apse (much of the rest of the church was decorated with fresco) the sort of economies that would be practiced in the last great cluster of monuments to be adorned in this manner. Between ca. 1290 and ca. 1320, numerous churches on the Greek mainland and in the capital received mosaic decoration. But in the Virgin Paregoretissa at Arta it is found only in the dome, while in the Holy Apostles at Thessalonike it is confined to the upper levels of the church. So, too, in Constantinople, mosaic occurs only in the south chapel of Hagia Maria Pammakarios, built in memory of Michael Tarchaneiotes Glabas (d. ca. 1305) by his widow. By contrast, as we have seen at Metochites’ Chora, the parekklesion was painted, whereas the vaults of the inner and outer narthexes and (presumably) the naos were encrusted with the more costly medium.

The lack of material studies of these Palaiologan programs makes it hazardous to generalize about the nature of their mosaic decoration or to relate them to the late Byzantine economy. Suffice it to say that although both gold- and silver-clad tesserae are in evidence at Arta,²⁴ at the Chora, while gold abounded, silver seems to have been eschewed entirely. On the other hand, the craftsmen at work on Metochites’ church apparently found no need to make use of cubes dipped in pigment²⁵ as we have seen employed in sixth-century Cyprus and Ravenna, or of such substitutions as white marble for silver as in Basil I’s additions to the decoration of the Great Church. Even if the supply side of the problem of decoration in this medium could be answered, aspects of the demand for mosaic would remain entangled in such imponderables as taste, frugality, and the pretensions of the monument in the eyes of the person who paid for its adornment.

Wall Painting

Till now in our account, wall painting has appeared as the poor relation or neglected stepchild of mosaic decoration. Given that throughout the empire—whether we look at it chronologically or geographically—the covering of walls with liquid paint was far

²² D. Abramovich, *Kievo-Pecherskii Paterik* (Kiev, 1930), 910, trans. C. Mango, *Art*, 222.

²³ On the use of imported smalt and craftsmen in this instance, see A. Poppe, “The Building of the Church of St. Sophia in Kiev,” *JMedHist* 7 (1981): 41–43.

²⁴ A. Orlandos, *Ἡ Παρηγορίτισσα τῆς Ἀρτῆς* (Athens, 1963), 122–23.

²⁵ P. Underwood, *The Kariye Djami*, 4 vols. (New York, 1966–75), 1:183.

more widely practiced than their adornment with hard tesserae, such neglect is surely unjustified. Moreover, poor relations may have merits concealed from or ignored by their more brilliant kinfolk. In the case of wall painting, these virtues were the relative ease with which it could be applied, and the aesthetic potential afforded by a fluid as against an intractable medium, as much as the economy that it offered to the person who wished to have a religious foundation (or, presumably, a secular habitation) decorated in this alternative manner. Certainly no later than such mid-eleventh-century undertakings as the frescoes of Hagia Sophia in Ohrid, and quite likely as early as those of Castelseprio in the ninth or tenth century, the advantages of the less expensive medium would have been apparent to patrons and to those whom they wished to impress.

We know almost nothing about the cost of the materials employed in wall paintings and even less about the remuneration of those who practiced this craft. On the rare occasion when epigraphic evidence records the amount expended on a newly built structure, it is couched in terms of the total cost of construction and painting (ἀνθηκωδομήθη κέ ἀνηστωρήθη), as in the case of the sum of donations (14½ nomismata) recorded in an inscription of 1265 in a church in the Mani.²⁶ Yet the employment of local artisans (recognizable in regional styles) as against “imported” mosaicists, the presence of a lime base (ubiquitous wherever masonry construction was practiced), and the normal use of pigments manufactured from widely available mineral and organic sources leave no doubt that mural painting represented one of the cheaper ways of adorning large spaces. Beyond the realm of immediate expenditure on material and labor, however, there are obvious similarities between this craft and mosaic decoration. Both systems covered vertical and curved surfaces; both techniques required advance preparation of areas in question. In other words, we are once again concerned with a multistage undertaking requiring scaffolding and assistants to move these temporary supports and to prepare substances that were intended to attach in would-be permanent fashion. In terms of the labor involved, this meant a hierarchy of artisans drawn up on the basis of their acquired skills; in terms of materials, the operation presupposed two or more preliminary renderings of the wall with lime plaster. The final preparatory coat often included chopped straw, an additive that enhanced the adhesion of paint. Like the plaster bed in which mosaic tesserae were set, the bonding of paint demanded a wet surface. Its drying rate—a function not only of the ambient temperature and humidity but also of the fabric of the wall to be covered—determined the pace at which the painter would have to work, a pace that in turn entailed the preparation by plastering of the surface below or beside the area on which he would work. (There is no evidence for female artists in this medium.)

If it is obvious that a full brush and a liquid medium could adorn a surface more

²⁶ D. Feissel and A. Philippidis-Braat, “Inventaires en vue d’un recueil des inscriptions historiques de Byzance. III, Inscriptions du Péloponnèse,” *TM* 9 (1985): 312, no. 55. I am grateful to Cécile Morrisson for drawing my attention to this and other quantitative data cited below. Similarly, overall estimates, in which the cost of construction is not differentiated from that of decoration, are the norms in records of this sort. Best known is the figure of 26,000 solidi spent by Julianus on San Vitale (Agnellus, *MGH, ScriptRerLangob*, chap. 59).

easily than the additive process by which tesserae were applied, this assumption is borne out by the presence of sutures: vertical plaster joins, indicating an interval between the painter's bursts of activity, are apparent at Hagia Sophia at Trebizond;²⁷ horizontal seams, signaling the necessary lowering of the scaffold, are evident at knee level of the angels in the western dome of the parekklesion of the Chora.²⁸ These sutures do not directly tell us about the speed of execution. In this latter church, Paul Underwood observed that as much as 14 m² were painted without moving the scaffold, but this could imply merely that the framework on which the painter(s) stood was wider here than elsewhere. Still, on the basis of the evidence set out immediately below, it is reasonable to infer that wall painting teams worked swiftly: in Serbia, as surely elsewhere, they seem to have covered 6–7 m² a day.²⁹

Whatever their rate of progress, the physical results—evident from the scaffolds erected by conservators, not from the ground—argue for speedy, on occasion even sloppy, execution. Painters did not always smooth, let alone polish, the plaster before starting work. Except for areas of flesh, surfaces were rendered with broad strokes that rarely began or ended with absolute precision. Contours do not coincide with the colors that they were supposed to limit (Fig. 2). Areas overcharged with paint sometimes dripped on to lower zones that the painter had either already finished or did not bother to clean up afterwards.³⁰ Then, as now, carefulness and productivity did not always march hand in hand. The result, nonetheless, was that programs of decoration were finished quickly. Smaller churches were certainly painted within a single season, that is, in the months between the last freeze of spring and the first frosts of winter. The claim in the *Russian Primary Chronicle* that the painting of the Dormition cathedral at Vladimir was begun in 1161 and finished on 30 August of that year is by no means incredible.³¹ While noting that the Russians at work in the cathedral of St. Michael in Moscow in 1344 “were unable to paint even half the church on account of its great size,” the *Troitskaja Chronicle* reports that the Greeks who decorated the church of the Mother of God “in the same year [that] they started also finished.”³² It is significant that we do not know if the cognomen Astrapas (“Lightning”), used by the early fourteenth-century painter Michael, was a family name or a nickname that he earned as the result of speedy work.³³

Swift dispatch of a commission spelled economy for the client, increased income for its executants, or both. We have no contracts for Byzantine muralists, but it is obvious that if these artisans were paid per diem (as they were in late antique Egypt), the patron would save money. If they were paid by the job (as often in Renaissance Italy),

²⁷ Winfield, “Painting Methods,” 132 and fig. 7c.

²⁸ Underwood, *Kariye Djami*, 3:302, 341, and pls. 416, 420, 423.

²⁹ Winfield, “Painting Methods,” 132.

³⁰ *Ibid.*, fig. 36.

³¹ I. N. Dmitriev, “Zametki po tekhnike russkikh stennykh rospisei X–XII vv.,” in *Ezhegodnik Instituta Istorii Iskusstva* (Moscow, 1954), 243, cited by Winfield, 133.

³² *Troitskaia Letopis'*, ed. M. D. Priselkov (Moscow, 1950), 366, trans. Mango, *Art*, 256.

³³ *PLP* 1:1595, 3:6353; cf. 8:19057.

the painters could move on to the next assignment. Until the grime of centuries is removed from inscriptions in rural monuments, it is not possible to track such accomplishments from year to year; for now we are largely dependent on observations based upon style, for example, that one of the painters who worked at Kurbinovo in Macedonia in 1191 had a hand in the decoration of the Anargyroi at Kastoria.³⁴ At present, the craftsman who holds the record for “signed” acts of participation is John Pagonemos, who is known to have painted eight churches in Crete between 1313/14 and 1347.³⁵

Progress within one building, like progress from building to building, was dependent on efficiency, born of a painter’s experience in the field, and synergy born of the on-the-job training of his assistants. In the first case, we may assume that he knew by heart the themes that he would paint and the adaptations that he would have to make as he accommodated these to such variables as the size of the monuments and the time he had at his disposal. The very normative nature of church decoration was in itself a stimulus to rapid execution. One commission might differ from another in specifying, for example, the use of gold or silver foil or expensive pigments like ultramarine (a product of lapis lazuli), but such specifications depended more on the wishes of the client and his provision of the materials in question—a responsibility with which the commissioner is charged in the *Book of the Eparch*³⁶—than on the skill of the craftsman. Most often the painter worked with familiar pigments, materials that he knew would remain stable in conjunction with his plaster ground, such as azurite, the normal Byzantine blue that was produced from basic copper carbonate.

The limited number of pigments eased both the painter’s task and that of his assistant. When paints were blended, this was done *in situ* by an aide, not by the craftsman on the wall. Seven or eight basic pigments furnished his palette: from these were created the seventeen tones noted at Asinou as employed for garments; flesh could call for seven, hair for five, and background for seven.³⁷ Most such blending involved lime white, the *psymithi* of the *Hermeneia*;³⁸ black was also much used, in the *proplasma* (an undercoat that could also involve dark green, yellow, and white), to darken other colors, and to trace outlines around figures. Painting was done in layers, the last one drying before the next was applied. (Azurite, for example, must be used *al secco*.) Final flesh pigments, black or ocher contours, and white highlights and inscriptions were added last.

So consistent were these techniques that generally, as in the case of books that lack colophons, we can distinguish only between periods and not between painters. Even

³⁴ E. N. Tsigaridas, “La peinture à Kastoria et en Macédoine grecque orientale vers l’année 1200,” in *Studenica et l’art byzantin autour de l’année 1200*, ed. V. Korać (Belgrade, 1988), 309–18.

³⁵ K. D. Kalokyris, “Ἰωάννης Παγωμένος ὁ βυζαντινὸς ζωγράφος τοῦ ΙΔ’ αἰῶνος,” *Κρ.Χρον.* 12 (1958): 347–67.

³⁶ Koder, *Eparchenbuch*, 139, lines 789–93.

³⁷ Winfield, “Painting Methods,” 136–38.

³⁸ Dionysios of Fournna, *Ἑρμηνεία τῆς ζωγραφικῆς τέχνης*, ed. A. Papadopoulos-Kerameus (St. Petersburg, 1909), 20, 21 and *passim*.

when we have signatures—as we do for Michael and Eutychios in four Macedonian churches painted between ca. 1295 and 1317³⁹—“hands” are essentially interchangeable. The scarcely escapable inference is that apprentices picked up the niceties of a master’s style along with his technical recipes. The most natural, as well as the most economical, way for such training to be transmitted would be from parent to child both working on the same job, as we know happened in the mid-fourteenth century at Hagia Sophia in Ohrid, painted by Constantine and his son John.⁴⁰ In the manner prescribed in the will of the icon painter Angelos Akotantos, if his son failed to learn the craft a man’s equipment might pass to his brother.⁴¹ This fortifies the notion that painters worked in family teams, an association specified in the dedicatory inscription of 1315 in the Anastasis church at Berroia, painted by Kallierges and his brother.⁴²

No less important for artistic production were the relationships between one craft and another. Both the contemporaneity of, and the technical and stylistic identities between, the mosaics of the Chora and the paintings of its parekklesion suggest that these undertakings are due to the same artists.⁴³ If one dismisses as circumstantial the fact that the only known parallel for Dumbarton Oaks’ (Macedonian?) icon of St. Peter, who wears his keys around his neck, occurs in the murals of the Peribleptos (now St. Clement) at Ohrid, the resemblances between the wall painting of the Chora and the St. Peter icon in the British Museum⁴⁴ are not so easily disregarded. It is likely that advances in archival research and painting conservation will only strengthen our awareness of the links between crafts that till recently have been treated as distinct specialties.

Icons and Their Adornments

If the painting of icons (I use the term in its conventional sense in modern European languages) was the normal cold-weather occupation of craftsmen who in warmer months decorated churches, it stands to reason that they earned no significantly

³⁹ P. Miljković-Peppek, *Deloto na zografite Mihailo i Eutihij* (Skopje, 1967). See also note 33 above.

⁴⁰ G. Subotić, “Ohridski slikar Konstantin i njegov sen Jovan,” *Zograf* 5 (1974): 44–47; *PLP* 4: 8593, 6:14166.

⁴¹ M. Manoussakas, “Ἡ διαθήκη τοῦ Ἀγγέλου Ἀκοτάντου (1436), ἀγνώστου Κρητικοῦ ζωγράφου,” *Δελ. Χρυσ. Ἀρχ. Ἐτ.*, ser. 4, 2 (1960–61): 146–48.

⁴² S. Pelekanides, *Καλλιέργης, ὅλης Θεσσαλίας ἄριστος ζωγράφος* (Athens, 1973), 7–8. For other examples, see R. S. Nelson, *Theodore Hagiopeitrites: A Late Byzantine Scribe and Illuminator*, 2 vols. (Vienna, 1991), 1:122.

⁴³ S. H. Young, “Relations between Byzantine Mosaic and Fresco Technique,” *JÖB* 25 (1976): 269–78.

⁴⁴ S. Michalarias and R. Cormack, *The Icon of St. Peter by the Master of the Monastery of the Chora*, (London, 1983). An even stronger case for a craftsman at work in both media can be made when an artist’s signature is present. Thus the deacon Peter, who painted an icon of St. George at Struga in 1266, was equally responsible for frescoes at Manastir and in the church of the Holy Archangel at Varoš near Prilep in Macedonia. See P. Miljković-Peppek, “Deux icônes d’Ohrid peu étudiées,” in *Byzantine East, Latin West: Art-Historical Studies in Honor of Kurt Weitzmann*, ed. C. Moss and K. Kiefer (Princeton, N.J., 1995), 524–25.

greater income in winter than they did for their efforts at other times of the year: had this not been the case, to the extent that painters were driven by economic considerations, they would have spent more time at the easel and less on the scaffold. It follows that the labor value involved in the production of an ordinary painted panel was far from high. The price of materials involved in such a panel probably added little to the size of the purchaser's investment. Boards cut from readily available trees (pine, birch, cypress, maple, cedar) were prepared with gesso for pigments, of much the same sort as were used in fresco painting, suspended in a medium based on egg yolk. (If there is any relation between the number of examples that survive and the number that were produced, many more icons after the ninth century were made in this tempera medium than before Iconoclasm in the wax-based medium known as encaustic.) All in all, the total cost of production bears out the low valuations placed on unadorned icons in literary sources and in such documents as monastic *typika*, inventories, and wills.

Given that these have recently been surveyed,⁴⁵ there is no necessity to rehearse this quantitative data in detail. Suffice it to point out that the value assigned to seven panels, described as "decorated" (ἐγκοσμημένα) but with the nature of this adornment specified in only two cases, in an upper-class household in Thessalonike in 1384, ranges from 2 to 7 hyperpyra; in the same document a horse is said to be worth 14 hyperpyra and "a very good silk blanket" up to 32 hyperpyra.⁴⁶ The relative value of these goods may also be gauged by comparing them to the total worth of possessions listed (ca. 1,000 hyperpyra) and the annual revenue of the head of this household (ca. 70–80 hyperpyra).⁴⁷ Apart from the low appraisal of the panels, however, the two images described in slightly greater detail suggest those properties of an icon that, in Byzantine eyes, contributed to its material significance: one is said to be of copper, the other as being adorned with glass (μετὰ ὑελίου).⁴⁸ The value of neither of these objects is high (2 and 4 hyperpyra respectively), and neither is celebrated as a pretentious creation. Yet these brief characterizations imply that images made of materials other than wood, and images embellished with other substances, were more representative of what a Byzantine understood by an icon than the bare, painted boards that the term generally connotes today.⁴⁹

Unfortunately, many of the documents that refer to lavishly decorated objects do not attach values to them. But pride of place in various sorts of lists provides sufficient justification for the view that richly adorned icons were esteemed more highly than undecorated specimens. The first item in the Patmos inventory, drawn up in 1200, is

⁴⁵ Usefully (and amusingly) by N. Oikonomides, "The Holy Icon as Asset," *DOP* 45 (1991): 35–44.

⁴⁶ *Actes de Docheiariou*, ed. N. Oikonomides, Archives de l'Athos (Paris, 1984), no. 49.

⁴⁷ Oikonomides, "Icon as Asset," 38.

⁴⁸ *Actes de Docheiariou*, 264, lines 25–26. It is possible that the icon said to be adorned "with glass" would, in modern terms, be recognized as having decorations in enamel and/or crystal, like the silver gilt frame with eight medallions and forty cabochons at Dumbarton Oaks (*DOCat* 2:154).

⁴⁹ It is worth noting in the Veljusa inventory of 1449 that icons not described as adorned are identified by their size. See L. Petit, "Le monastère de Notre-Dame de Pitié en Macédoine," *IRAIK* 6 (1900): 118–19. This may imply that painters were paid according to the size of panels.

a “large holy icon of John Theologos with a gilded silver border,” while the fifth piece in this catalogue is “another icon of the holy apostles Peter and Paul, entirely revetted with gilded silver.”⁵⁰ It does not take much insight to see that the corollary attitude was equally true: the more richly encrusted an icon was, the more justifiable is the assumption that it was an especially revered object. This equation is spelled out by Niketas Choniates in his account of Isaac II Angelos (whom this historian elsewhere records as a despoiler of sanctuaries): “he had such faith in the Mother of God that he poured out his soul to her icons . . . overlaid [them] with gold and adorned [them] all around with precious gems and set them up as votive gifts to be venerated in those churches where the pious most often congregate.”⁵¹ Whether or not such prodigality was typical, there can be little doubt that the cult of icons as a whole stimulated considerable financial investment and generated widespread collateral activity. The frontispiece of the Hamilton Psalter in Berlin⁵² shows a group of aristocratic devotees in their private chapel, before an icon of the Theotokos. The image stands within a ciborium, resting on an inlaid pavement and enclosed behind an ornate grille. Each aspect of this setting would have been made to order, as would the cloth that covered the icon, the lamps that stand beside it, and the rich costumes of its adorers.

Probably the closest that we can come to the material splendor occasioned by piety are the portable mosaic icons that survive today in fewer than fifty examples. Most of these belong to the thirteenth and fourteenth centuries and display a technique that—in addition to our astonishment at the skill displayed in their manipulation of minute tesserae and regret at the often huge losses of material resulting from the use of wax (or wax and resin) binders—allows approximate calculations as to the means and rate of their manufacture. The Transfiguration mosaic of about 1200 in the Louvre⁵³ measures 52 × 35 cm and consists of tesserae of gilded copper, marble, lapis lazuli, and colored glass (Fig. 3). Since these have an average area of ½ to 1 mm, it is evident that some 36,400 cubes were employed. If we conservatively estimate that the selection, lifting, and proper insertion of each of these elements took five seconds, we arrive at a figure of 4,800 man-hours for the production of the icon. Had the craftsman worked at this blinding task for twelve hours each day, he would have taken thirteen months to complete his task.

Of the conditions in which he worked and the cost to the client we know nothing. But the sheer duration of his labor once again suggests the diversities involved in the industries of art in Byzantium. The Life of St. Athanasios of Athos (d. 1001) indicates,

⁵⁰ C. Astruc, “L’inventaire dressé en septembre 1200 du trésor et de la bibliothèque de Patmos,” *TM* 8 (1981): 20. For the principal documents of this genre, see *ODB*, s.v. “Inventory.”

⁵¹ *Nicetae Choniatae Historia*, ed. J. L. van Dieten, 2 vols. (Berlin–New York, 1975), 1:444, lines 14–18.

⁵² Kupferstichkab. Hamilton 78A9, fol. 39v. See H. Belting, *Das illuminierte Buch in der spätbyzantinischen Gesellschaft* (Heidelberg, 1970), 5–6, 73 and fig. 1.

⁵³ *Byzance: L’art byzantin dans les collections publiques françaises*, ed. J. Durand (Paris, 1992), no. 279. For the genre as a whole, see O. Demus, *Die byzantinischen Mosaikiken*, vol. 1, *Die grossformatigen Ikonen* (Vienna, 1991).

by contrast, that an icon of this saint could be made ready in three days. The speed attributed to this undertaking must be understood as at least in part due to the hagiographical context in which the story occurs. But the alleged rapidity of execution is borne out by two documents of commission that survive from Venetian Crete.⁵⁴ In the first, dated 14 July 1412, the icon painter Nicholas Philanthropenos is charged to produce (two?) altarpieces painted against gold backgrounds within a month and a half. For these he was to receive 30 hyperpyra, payable upon completion of the work. The painter was given 6 hyperpyra in advance with which to buy the gold. The second document, of 23 July 1418, specifies two icons, each less than a meter high, and for each of which Philanthropenos would be paid 10 hyperpyra. Out of this sum he had to provide both the imported pigments and gold foil,⁵⁵ while, unusually, the commissioner, a resident of a village near Chandax, would supply the wood. A term of “about twenty days” is specified as the period of execution.

Unlike these Cretan contracts which are severely pragmatic in nature, the Life of Athanasios offers some precious if circumstantial evidence for the business of icon production: Pantoleon, the painter who made the image of this holy man, is said to have been engaged on an imperial commission. Moreover, he worked at home rather than in one of the studios (*pergulae*) that had existed early in the city’s history.⁵⁶ While Pantoleon was on equal terms with the *hegoumenos* of a monastery in the capital and had a servant through whom commissions to the artist were sometimes transmitted, the Life of Athanasios contains no indication that Pantoleon was the head of a workshop or employed assistants. At most, if he is to be identified with the person of the same name whose “signature” appears beside seventy-nine miniatures in the Menologion of Basil II,⁵⁷ we are entitled to recognize him as *primus inter pares* among early eleventh-century painters in Constantinople.

Icon making and manuscript illumination, then, need not have taken place in the workshop circumstances that we associate with book production in the Gothic West and certainly were not enterprises on the scale of Byzantine mosaic and fresco decoration. On the other hand, as we have already seen, panel painting generated a host of related activities addressed to the business of furnishing embellishments for the images produced by men like Pantoleon. Such appendages are signaled as early as 1077: the

⁵⁴ See M. Constantoudaki-Kitromilides, “A Fifteenth-Century Byzantine Icon Painter Working on Mosaics in Venice,” *JÖB* 32.5 (1982): 265–72. It is of concern to our present interest in the various functions discharged by painters that, when resident in Venice, Philanthropenos is described in a document of June 1435 as “magister artis musaice in ecclesia Sancti Marci.”

⁵⁵ Questioned by the Venetian authorities concerning his recent trip to Constantinople, Philanthropenos is recorded as responding that “ivit pro emendis coloribus, folis argenti et alia sibi necessaria pro arte pictorie, quam exercet.” See *ibid.*, 271 n. 15. The painter’s procurement of materials in this instance represents a difference from the *Book of the Eparch*, 22.1 (Koder, *Eparchenbuch*, 138, lines 789–93), which provides that the commissioner supply the craft worker with the necessary materials. This change could be due to a new status of icon painters in the Palaiologan era or to the remoteness of the situation in which he worked.

⁵⁶ Mentioned in a law of 374 in *CTh* 13.4.2.

⁵⁷ I. Ševčenko, “On Pantoleon the Painter,” *JÖB* 21 (1972): 241–49.

Diataxis of Michael Attaleiates notes the presence in his monastery of an icon of St. Panteleimon painted on wood but set in a gilded silver frame with twenty-five cabochons and sixteen smaller images mounted in this *peripherion*.⁵⁸ Ornamentation of this sort is usually thought of as characteristic of the time of Manuel Philes (d. ca. 1345), whose descriptions include many such complexities. But Attaleiates' *diataxis* indicates that "ordinary" panels had metastasized into elaborate productions involving precious metals, glass, and enameling before the onset of the Komnenian era. In addition to silver-gilt (*diachrysoi*) icons, lamps with suspension chains, capitals for the holy doors, and other *skeue*, we find in this document one object that bespeaks a commerce in metalwork grown *pari passu* with the cult of icons: a silver triptych, displaying the Deesis and ten saints, which rested on a gilded *proseuchadion*. This seems to have been a sort of footstool on which sick or aged monks could kneel to make their devotions.⁵⁹

No such artifact survives today, but we still have a host of precious-metal frames, covers, and haloes for the figures depicted on icons.⁶⁰ Since no panel painter is known to have been the head of, or participant in, an industrial enterprise that could have turned out these ornaments, it seems likely that they were acquired from shops specializing in their production. Indeed, A. Grabar suggested that the setting of even so precious a mosaic icon as the Twelve Feasts diptych in Florence was made of prefabricated enameled plaquettes and strips of rinceaux, cut to size as need dictated.⁶¹ There is nothing inherently improbable in the notion of adornments produced *en série* being added to luxurious *unica*: as we shall see below, in the tenth century the ivory plaques on numerous boxes were surrounded by decorative bone strips. Less compelling is the same author's attempt to localize at least one group of metal decorations applied to expensive portable mosaics. Struck by the resemblance between the silver repoussé cover and frame of an early fourteenth-century mosaic icon at Vatopedi and those of two similarly encrusted works at the same site, Grabar proposed that they were made in the monastery itself. There is no way of verifying this hypothesis, but, given both the similar figures (evangelists, apostles, church fathers) on pieces not known to have any relation with the holy mountain and Vatopedi's well-known connections with the outside world, it must for now be taken on trust.

Metalwork

The thin and often filigreed revetments of the fourteenth century pose an obvious contrast to the numerous and weighty silver objects, of a high degree of fineness, that survive from late antiquity. For these examples of domestic plate, largitio dishes, lamp stands, patens, chalices, and so on, we possess few or no equivalents from the post-iconoclastic era. Why should this be? Cultural choices—decisions regarding the func-

⁵⁸ P. Gautier, "La *Diataxis* de Michel Attaleiate," *REB* 39 (1981): 91, lines 1197–99.

⁵⁹ *Ibid.*, 89, lines 1177–79 with n. 7.

⁶⁰ The genre was surveyed by A. Grabar, *Les revêtements en or et en argent des icônes byzantines du moyen âge* (Venice, 1975).

⁶¹ Grabar, *Revêtements*, no. 31.

tions and destinations to which a society commits its precious metals—may well lie at the root of the difference, but economic considerations such as the availability of raw materials play no small part in determining the uses to which gold and silver are put. State regulation, market forces, and artisanal skill were, as always, not independent factors but coefficients involved in the choices that Byzantines made after the iconoclast period.

If “thesaurization”—the process whereby silver moved out of monetary circulation into the hands of craftsmen—is one key to our understanding of fine metalworking before this time,⁶² the absence of silver already noted in mosaics of the seventh century is surely a part of this process. But another factor, the liquidity of precious metals—always understood⁶³ but newly important in the face of successive governmental financial crises and the rapidly changing fortunes of families and individuals—may help explain why we have relatively few large pieces in gold or silver attributable to Byzantium after the seventh century. This, of course, is not to argue that they were not made. Herakleios’ seizure of ecclesiastical treasures in 622⁶⁴ was neither the first nor last in a long series of imperial expropriations in Byzantine history. The great gilded organs, the golden plane tree and lions that stood beside the imperial throne of Theophilos, and the Pentapyrgion (a gilded display case that held the imperial regalia)—ornaments that in all took more than 20,000 pounds of gold⁶⁵—were melted down in the reign of his successor. More scandalous were Alexios I’s alienations of ecclesiastical treasure,⁶⁶ but the very fact that such *skeue* were available argues that churches after their despoilment were normally restocked with necessities and luxuries in precious metal. This implies, of course, a new round of fabrication in each instance. Moreover, in the secular realm, it is highly unlikely that Leo, a calligrapher of the ninth or tenth century, identified by inscription as the owner of the one preserved Byzantine silver inkpot, now in

⁶² On this, see above all P. Grierson, “The Role of Silver in the Early Byzantine Economy,” in *Ecclesiastical Silver Plate* (as above, note 8), 137–46.

⁶³ M. Vickers, “Metrological Reflections: Attic, Hellenistic, Parthian and Sasanian Gold and Silver Plate,” *Studia Iranica* 24 (1995): 163–85.

⁶⁴ Herakleios: *Nikephoros, Patriarch of Constantinople, Short History*, ed. C. Mango (Washington, D.C., 1990), 54, lines 1–3; Theophanes, *Chronographia*, ed. C. de Boor, 2 vols. (Leipzig, 1883–85; repr. Hildesheim), 1:302–3. An earlier example of Christian liturgical paraphernalia offered in time of war is the dispatch to Maurice of περιρραντήριά τε καὶ ἐκπώματα καὶ ἄλλα ὅσα τιμαλφέστατα σκεύη by the Persian commander of Chlomarion in an attempt to end the Byzantine siege of the city, probably in 578. The future emperor refused them, saying that he had not come to wage war on Christ. See *The History of Menander the Guardsman*, ed. R. C. Blockley (Liverpool, 1985), 204, line 27–205, line 35.

⁶⁵ *Theophanes Continuatus*, ed. I. Bekker (Bonn, 1838), 173, lines 6–14; 257, lines 1–9.

⁶⁶ See A. A. Glavinas, Ἡ ἐπὶ Ἀλεξίου Κομνηνοῦ (1081–1118) περὶ ἱερῶν σκευῶν, κειμηλίων καὶ ἀγίων εἰκόνων ἔρις (1081–1095) (Thessalonike, 1995), and Choniates, *Historia*, 443, lines 62–64 (Isaac II Angelos). The ubiquity of this practice, which could serve both economic and political ends, is attested by al-Maqrizi, who reports that, after 1169, the Ayyubids removed the silver plaques on which were inscribed the names of the Fatimid caliphs from the mihrabs of the mosques of Cairo. He observes that they weighed 5,000 dirhems of pure silver, clearly implying that the plaques were melted down. See his *Histoire d’Egypte*, trans. E. Blochet (Paris, 1908), 49.

Padua and decorated with a *gorgoneion* and ancient divinities,⁶⁷ was the only individual of his time to commission an object of this sort. In short, we may conclude that, in itself, the rarity of artifacts surviving in this medium today says little about a shortage of silver in the Byzantine era. Rather, we can presume that pieces were, then as now, regularly melted down and reconstituted. Were this true, then even though fresh supplies from ore-bearing and alluvial sources may have declined,⁶⁸ a sort of overall homeostatic balance would have obtained in the availability of these materials.

Yet another factor may have contributed to the recycling of silver. The fineness (purity) of the metal is directly correlated with its softness. Late antique silver objects had contained 1.5–10% copper⁶⁹ to harden the pieces made from such alloys. If creations of the eighth century and later adhered to these proportions rather than to the much lower fineness of modern objects in this medium, they could have suffered wear to the point where they would be consigned to the melting pot. Yet too little middle and late Byzantine silver has been analyzed to speak with any certainty on this point. The evidence, direct and indirect, for recycling offers a better guide to this culture's readiness to dispose of and refabricate precious metal objects.

No less than in late antiquity, when motives of piety and vanity converged to promote the melting of gold and silver objects,⁷⁰ Byzantine sources and (to a much lesser extent)⁷¹ artifacts point to old silver as the material from which new creations were fashioned. In the early period, it is clear from Cyril of Scythopolis' Life of St. Sabas that the founder of the Palestinian Great Lavra was willing to liquidate the monastery's liturgical goods in times of financial trouble.⁷² In the middle period, the *Book of the*

⁶⁷ C. Mango, "Storia dell'arte," in *La civiltà bizantina dal IX al XI secolo*, ed. A. Guillou (Bari, 1978), 282 and fig. 57. A courtier's letter written to the young Romanos, son of Constantine VII, refers to silver inkwells (in the plural) offered to the future emperor: P. Odorico, "Il calamo d'argento: Un carme inedito in onore di Romano II," *JÖB* 37 (1987): 67, lines 17–18, and 68, line 49.

⁶⁸ On this vexed question, see S. Vryonis, "The Question of the Byzantine Mines," *Speculum* 37 (1962): 1–7, the comments of A. Kazhdan, *VizVrem* 25 (1964): 259–61, and K.-P. Matschke, "Mining," *EHB*. On Byzantine metallurgy, see M. K. Papathanassiou, "Metallurgy and Metalworking Techniques," *EHB*.

⁶⁹ See P. Meyer's table of elemental compositions in *Ecclesiastical Silver Plate* (as above, note 8), 184–88. On repairs to probably representative late antique objects, see M. M. Mango and A. Bennett, *The Seuso Treasure*, Part 1 (Ann Arbor, 1994), 27, and R. Newman, "Technical Examination," in *Ecclesiastical Silver Plate* (as above, note 8), 81 and figs. S28.2–4. With the exception of icons, repairs to and the restoration of Byzantine objects are topics little noted in Byzantine texts or by modern art historians. At the Kosmosoteira monastery (L. Petit, "Typikon du monastère de la Kosmosoteira près d'Aenos [1152]," *IRAİK* 13 [1908]: 71), provision was made for the remounting of dilapidated mosaic icons on elm boards. The well-known 6th-century Christ icon at Mount Sinai (no. B1) was repainted in the Byzantine era: E. J. W. Hawkins, "Byzantine Portraits and the Development of the Representation of Christ from the 6th to the 14th Century," *JÖB* 32.5 (1982): 395.

⁷⁰ The evidence is assembled by A. Cutler, "The Right Hand's Cunning: Craftsmanship and the Demand for Art in Late Antiquity and the Early Middle Ages," *Speculum* 72 (1997): 971–94.

⁷¹ As yet no physical test exists to determine whether a gold or silver object was made from recycled material.

⁷² *Kyrrillos von Skythopolis*, 159, lines 28–30.

Eparch notes the voluntary sale to jewelers of gold, silver, pearls, and precious stones, placing this record just ahead of an attempt to regulate trade in sacred objects, damaged or intact.⁷³ At least at this time, ἀργυροπράται were accustomed to making appraisals,⁷⁴ some of which led to their acquisition of stocks of jewelry, if a copper-alloy jug in London, found to contain gold and silver finger rings, earrings, and pendants,⁷⁵ is any guide. Finally, the fact that, as late as two decades before the fall of Constantinople to the Ottomans, liturgical silver was still being melted to be turned into other *skeue* is apparent from Sylvester Syropoulos' lament that, instead of being repaired, three decrepit *rhypidia* from among the treasures of the Great Church were transformed into a candelabrum, thus causing the image of the cherubim to disappear.⁷⁶

The enduring practice of liquidating precious-metal artifacts presupposes a desire for the objects that would result from ingots produced with these in mind. Consequently, it only makes sense to assume a market for such pieces, no less perennial than the recycling that allowed them to come into being. We have no statistics that would enable us to calculate the relationship between supply and demand and only a few—some are discussed below—that indicate relative prices for objects of gold and silver. Yet it is worth remembering that, in the middle of the so-called Dark Ages, the bishops of the Council in Trullo saw fit to criticize the way candidates for admission to nunneries dressed in fine silks and arrived adorned with gold and jewels.⁷⁷ Even if this is no more than an echo of patristic hostility to material splendor, it speaks for the diversion of considerable funds in the direction of finery and this, in turn, of a clientele for silk weavers and dyes as well as gem cutters and goldsmiths.

There is no reason to credit this last class of craftsmen with any innovations that would have achieved greater efficiency in the workshop or price reductions that would appeal to a broader market. Each of the methods—hammering, annealing, raising by repoussé, casting, cold work,⁷⁸ and so on—used by the Byzantines had formed part of

⁷³ *Book of the Eparch*, 2.4, 2.7 (Koder, *Eparchenbuch*, 86).

⁷⁴ *Book of the Eparch*, 2.11 (Koder, *Eparchenbuch*, 88).

⁷⁵ Sotheby's Antiquities Sale, 5 July 1982, lots no. 202, 217–27, 231–33. The jug is now in the British Museum, M. & LA. 1982.12–1.1. Since its purchase, other pieces from the same source have been acquired. Neither the jug nor any of the jewelry has been published. I am grateful to Christopher Entwistle for information on this point.

⁷⁶ V. Laurent, *Les "mémoires" du Grand Ecclésiarque de l'Eglise de Constantinople Sylvestre Syropoulos sur le Concile de Florence (1438–1439)* (Paris, 1971), 188, lines 16–24. Concerning objects in the secular domain, Syropoulos (*ibid.*, 188, line 26–190, line 1) remarks that the emperor (John VIII) had the gold pieces offered by the metropolitan of Russia made into a gold coverlet for his bedroom and trappings for his horses.

⁷⁷ Canon 54 (Rhalles and Potles, Σύνταγμα 4:411).

⁷⁸ Represented, for instance, by one of the few pieces of middle Byzantine silver jewelry—a bracelet in the Museum of Fine Arts, Boston (N. Netzer, *Catalogue of Medieval Objects: Metalwork* [Boston, 1991], no. 66, with technical analysis by R. Newman)—to have received thorough investigation. The piece, consisting of silver 93.5% fine with an admixture of gold and lead, was worked by hammering, repoussé, chasing, and engraving. The griffons and lions in its intersecting roundels vary sufficiently to suggest execution by freehand. Durand, *Byzance*, no. 253, suggests that a group of similar bracelets now in the Louvre was made in Bulgaria in the 12th or 13th century. For late antique processes of manufacture, cf. C. E. Snow in *Ecclesiastical Silver Plate* (as above, note 8), 197–201.

the precious metal worker's repertoire since the days of the Sumerians. As against work in the precious metals, large-scale bronze casting was evidently not a craft practiced in Constantinople in the ninth century: in 881 bells were sent from Venice for a new church built by Basil I.⁷⁹ On the other hand, Doge Pietro I Orseolo (976–978) ordered for San Marco from the capital an altar table, “miro opere, ex auro et argento,”⁸⁰ as in 1105 Ordelafo Falier would commission in Constantinople the Pala d'Oro for the ducal church. This of course survives, as do such items of economic exchange as the series of bronze doors exported between 1060 and 1100 to Amalfi, Montecassino, and Venice, among other sites. Many of these have figures and inscriptions inlaid in silver. Smaller towns required all but the most sophisticated metal products (e.g., for household fittings), a diversity that is in evidence wherever excavation has been undertaken. Thus the sizable sequence of silver and vermeil (gilded silver, bronze, or copper) processional crosses with figures and inscriptions in niello, known from the eleventh and twelfth centuries and now distributed between Cleveland, Geneva, and Matzkhvarichi (Georgia), Paris, and Washington, D.C., could well have been made in Anatolia.⁸¹ Every monastery of any pretensions would have possessed one; according to his will, Eustathios Boilas, a reasonably wealthy native of Cappadocia who founded his own monastery, had two.⁸² Industrially if not aesthetically—from the chased figures on the obverses of surviving specimens to the nielloed inscriptions on their reverses—there is little to distinguish one member of the group from another.

Arguably, technical variations in metalwork were driven by the economic attitude of the consumer, not by the skill of the craftsman or his place of residence and training. If the so-called Cross of Adrianople was made for Sisinnios II, the patriarch of Constantinople (996–998), as has been proposed,⁸³ it may be hard to believe that its fabric of thin sheets of silver wrapped around an iron core was dictated by a need to be

⁷⁹ Between the 4th and 7th century, cast doors were installed at Mount Sinai and at Hagia Sophia in Constantinople. But the improvisational nature of the door in the southwest vestibule of the Great Church, set up between 838 and 840, and the reuse of older doors in the Nea Ekklesia (880) and at the Golden Gate (963) in the capital suggests the absence of technical skills. For utilitarian metalwork, much more widely practiced, see A. Harvey, *Economic Expansion in the Byzantine Empire, 900–1200* (Cambridge, 1989), 243.

⁸⁰ Ioannes Diaconus, *Chronicon venetum*, in *Cronache veneziane antichissime*, ed. G. Monticolo, vol. 1 (Rome, 1890), 126, lines 13–16; 143, lines 1–2.

⁸¹ Both the crosses in Geneva and Paris are said to have been found at Eskişehir. The group is in large part discussed by C. Mango, “La croix dite de Michel le Cérulaire et la croix de Saint-Michel de Sykéon,” *CahArch* 36 (1988): 41–49.

⁸² P. Lemerle, *Cinq études sur le XIe siècle byzantin* (Paris, 1977), 24, lines 119–21.

⁸³ L. Bouras, *The Cross of Adrianople, a Silver Processional Cross of the Middle Byzantine Period* (Athens, 1979). See also K. Sandin, “Aspects of the Artisanry and Possible Liturgical Use of the Cross of Adrianople,” *Byzantinorossica* 1 (1995): 58–74. That economy, if observed in this instance, was addressed to the materials employed and not the labor involved is evident from the fact that the central medallions that cover the junctures of the four individual sheets on each face of the cross are separate disks. The diffusion of crosses sheathed in gold or silver is indicated by references in such documents as the *typikon* of Gregory Pakourianos (before 1086) and the *diataxis* of Michael Attaleiates (1077), where they are described as ἡμφοτεσμέντοι or ἐνδεδυμέντοι. See P. Gautier, “Le *typikon* du sébaste Grégoire Pakourianos,” *REB* 42 (1984): 121, line 1682; and idem, “La *Diataxis*,” 127, line 1759.

frugal. But there can be little doubt that considerations of this order led to the practice of gilding silver. Vermeil of this sort is already apparent on two icons of St. Michael of the tenth and eleventh centuries in Venice, both otherwise lavished with precious stone and enamels.⁸⁴ In this respect, documents of this period can supplement our examination of the objects themselves when they record, for example in Attaleiates' *Diataxis*, the method of manufacture and weight of *diskopoteria* (chalice and paten sets), here described as ἀργυροῦν διάχρυσον, and silver icons with gilded silver or copper frames (μετὰ περιφερίων ἀργυρῶν διαχρύσων σαρούτ).⁸⁵ In the same inventory the value of two hanging lamps, complete with chains and made in the same technique, may be estimated at ca. 30½ and 31⅔ nomismata, respectively. These figures take on significance when compared to the 8 nomismata per annum that Attaleiates left to the church of St. George Kyparissiotēs in Constantinople for the upkeep of his tomb and the 10 nomismata offered for the performance of prayers for himself and his family. We have no way of estimating the added value of the vermeil applied to two *diskopoteria* that are described in the *Typikon* of the Kecharitomene nunnery (1118) as weighing between 85.8 hyperpyra and 88.4 hyperpyra. What is clear is that even gilding was used sparingly.⁸⁶

It would be a mistake to see such economies as acts of individual parsimony. Rather, the use of vermeil describes a cultural phenomenon, sanctioned by imperial practice⁸⁷ and identified even in epigrams the purpose of which was to praise the aristocratic taste of an object's commissioner.⁸⁸ Lower on the social scale were tinned copper patens, chalices, polykandela, and other lamps. Reproducing earlier and contemporary types in silver,⁸⁹ these lightweight imitations evidently met with the same broad acceptance as the coatings of gold just noted on a variety of liturgical paraphernalia in more exalted circumstances. So, too, processional crosses consisting of thin sheets of brass⁹⁰

⁸⁴ Grabar, *Revêtements*, nos. 1, 2.

⁸⁵ Gautier, "*Diataxis*," 91, line 1204; 127, line 1773.

⁸⁶ P. Gautier, "Le *typikon* de la Theotokos Kécharitôméné," *REB* 43 (1985): 155. These figures are based on calculations kindly supplied by Cécile Morrisson. For the restricted use of vermeil, see the color photos of the Cleveland cross on the front and back covers of J. A. Cotsonis, *Byzantine Figurative Processional Crosses* (Washington, D.C., 1994). However, the imperial commission—the cross that Nikephoros Phokas gave to the Lavra on Mount Athos—is much more richly gilded. Cf. A. Cutler and J.-M. Spieser, *Byzance médiévale* (Paris, 1996), fig. 123.

⁸⁷ Thus Michael VII Doukas is recorded as conveying to the private church of a relative icons with gilded adornments (διὰ χρυσῶν πετάλων): MM 5:5–6. The inventory of this church begins with three bronze crosses and, following the gilt icons, includes a bronze diskopoterion, eleven enameled (? χυτὰ) polykandela, eleven iron crowns, and two pairs of iron candelabra.

⁸⁸ S. G. Mercati, "Epigrammi sul cratere argenteo di Costantio Dalasseno," *RendPontAcc* 3 (1925): 313–16. One of the six epigrams on this bowl tells us that it had "the appearance of inlaid gold" (χρυσοκολλήτῳ θεῖα).

⁸⁹ M. M. Mango, "Significance of Medieval Tinned Copper Objects" *BSCA* 16 (1990): 165–66. It is worth remarking that even the emperor's household furnishings while on campaign included tinned bronze bowls. These were for the use of *archontes* and "well-born refugees," while the emperor himself was provided with specimens of cast silver. See the "appendix" to *De cerimoniis aulae byzantinae*, ed. J. J. Reiske, 2 vols. (Bonn, 1829), 1:465–66, and the new edition of this text, *Three Treatises on Imperial Military Expeditions*, ed. J. Haldon 28 (Vienna, 1990), 108, lines 211–14.

⁹⁰ *Byzantium: Treasures of Byzantine Art and Culture from British Collections*, ed. D. Buckton (London, 1994), nos. 161, 175 (M. M. Mango).

regularly reproduced the form of the doubtlessly more expensive versions sheathed in precious metal.

Yet it is cast objects that most clearly reveal the relationship between lower cost and broad distribution. By no means limited to the base metals, this technique was used for silver pectoral crosses inscribed with the generic (because anonymous) invocation “Lord, help the wearer.”⁹¹ Whatever the metal employed, casts are made from a wax model that is destroyed by the action of pouring in the molten material. The matrix itself,⁹² however, remains fit for reuse and ready to prompt the longer and uniform series of *enkolpia* and reliquary crosses that have turned up in excavations as far afield as Bulgaria,⁹³ throughout the Balkans, in Alexandria, and on Cyprus. Even when silvered, gilded, or customized by inscriptions incised after casting, these bronze, brass, or lead crosses represent metalwork at the “grass roots” level. Locally manufactured groups have been established by both chemical analysis and the observation of shared defects deriving from the mold that was their common origin. While openwork brass polykandela may have been cast in Constantinople and Serbia as late as the fourteenth century,⁹⁴ the cast figures of Christ and the Mother of God that constitute the majority of pectoral crosses found throughout the Balkans, Anatolia, and the eastern Mediterranean would remain undatable were it not for other evidence yielded by the context from which they have emerged.

Enameling

In a narrow functional sense, the role of enamels in the East Christian world was no more than a surrogate for the brilliance and variety of hues of the precious and semi-precious stones that continued to appear on jewelry and, more rarely, book covers and crowns. Yet in Byzantine (and Georgian) hands this cheaper substitute became not only a form of high art applied to a greater variety of objects than any other substance, but also one that was understood as the very emblem of luxury⁹⁵ and sanctity.⁹⁶ This reputation must at least in part have been founded on the expensive materials and labor-intensive means involved in the manufacture of enamels, no matter which of the several techniques known to the Byzantines (see below) was employed. Each required the delicacy of a goldsmith to prepare the ground and the filigree that would house the initially liquid glass, the skill of a fine glassworker to pour and fire this material,

⁹¹ E.g., a gilded specimen at Dumbarton Oaks: *DOCat* 2: no. 99.

⁹² See, e.g., a schist mold for eulogiai in the Louvre, dated to the 11th or 12th century by Durand, *Byzance*, no. 247. The image of the stylite St. Symeon Thaumaturgos shows how long-lived were such pre-iconoclastic motifs on popular artifacts.

⁹³ L. Doncheva-Petkova, “Problemi pri proizvodstvoto na krüstovete-enkolpioni (materiali, tekhnologii, atelieta),” *Arkheologiya* 34.4 (1992): 1–12; for a broader survey that appeared after the present essay was written, see B. Pitarakis, “Un groupe de croix-reliquaires pectorales en bronze . . .,” *CahArch* 46 (1999): 81–102.

⁹⁴ See *Byzantium*, no. 216 (M. M. Mango).

⁹⁵ Thus the *De cer.*, 1:99, lines 14–15, records that enamel, gold, and precious stones adorned the harness of the emperor’s horse. The same role is described in the Digenes epic (*Digenes Akrites MS G*, ed. J. Mavrogordato [Oxford, 1963], 80, 122, 128), where enameled icons of St. Theodore are also noted.

and the dexterity of a jeweler to grind and polish the resulting composite surface after the flux had cooled and hardened.

Perhaps because of this multiplicity of aptitudes, we do not know whether enamels were produced by goldsmiths, glassworkers, or jewelers, or, indeed, if these distinctions had the categorical force in Byzantium that they had in later societies. What is sure is that the craft presupposed a relatively plentiful supply of gold, which in the light of the coinage needs no demonstration, and of colored glass, the constraints on which I have already noted with respect to early Byzantine mosaics. Moreover, precisely because enamel was used as an adjunct to a wide range of objects (book covers, items of jewelry, etc.) defined by their function in medieval inventories, we have no way of assigning an economic value to individual pieces in this medium. Suffice it to say that while the ownership of enamels certainly extended below the imperial level,⁹⁷ such possessions were always regarded as precious, conveyed together with other valuables in wills,⁹⁸ and, like jewels and other hardstones, put to secondary use.⁹⁹ Unlike gems, however, the losses to wear that result from the use of enamels are considerable: being essentially pieces of glass, they fractured easily, exposing their (usually) gold substrate to recycling in the manner noted above.

Despite or perhaps because of such losses, enamels continued in demand throughout the Byzantine era. Specimens have been assigned by art historians to every century but the eighth and the fifteenth. Nonetheless, unlike other crafts, production in this medium underwent a series of pronounced changes in technique. Until roughly the end of Iconoclasm, enamel was produced in a manner known since the Hellenistic era—a filigree technique in which molten glass is poured between gold wires or strips soldered on their edges to the surface of an object; inscriptions are composed of strips and not enameled.¹⁰⁰ By contrast, from the middle of the ninth through at least the middle of the next century, true cloisons (compartments) were employed, formed by gold strips set on their edges in seas of fused glass. This enamel—typically translucent green, as in the case of the Beresford Hope cross in the Victoria and Albert Museum¹⁰¹—entirely covers the surface of the metal on which it is laid, a thoroughness

⁹⁶ The *Vita Basilii* (*Theophanes Continuatus*, 330, line 23–331, line 1) reports that enamel images of Christ appeared “several times” on the architrave of the chapel that the emperor dedicated to St. Clement in the Great Palace.

⁹⁷ P. Hetherington, “Enamels in the Byzantine World: Ownership and Distribution,” *BZ* 81 (1988): 29–33.

⁹⁸ E.g., that of Kale-Maria Pakouriane in 1098 (*Actes d'Iviron*, ed. J. Lefort et al., Archives de l'Athos, 2 vols. [Paris, 1990], no. 47, 179, line 23).

⁹⁹ As most notably on the Pala d'Oro in Venice.

¹⁰⁰ Among the few genuine surviving examples of this technique is a pendant depicting a long-legged bird now in the British Museum: *Byzantium*, no. 98 (D. Buckton).

¹⁰¹ *Ibid.*, no. 99 (D. Buckton). This piece was formerly regarded as a Roman work. Although the technique may have been imported from the West (see D. Buckton, “Byzantine Enamel and the West,” *ByzF* 13 [1988]: 235–44), the knee-length *kolobion* that Christ wears on the cross, as he does in the Paris Gregory ms. gr. 510 of 880–883, makes a date in the second half of the 9th century much more likely. This chronology is confirmed by the votive crown of Leo VI (886–912) in the treasury of San Marco, Venice, where the same technique is employed.

that has earned it the name of *Vollschmelz*. While technically this makes perfect sense, since gold is the element to which melted glass best adheres, the economic historian will note the prodigality of using it as a basis that is completely concealed by the overlay. So spendthrift an attitude is only marginally counterbalanced by the thinness of the cloisons inserted into the enamel and, in any case, was succeeded by a method that displays the gold ground much more openly. *Senkschmelz*, as this tenth- and eleventh-century procedure has been called, was the technique used in the famous reliquary of the True Cross at Limburg an-der-Lahn,¹⁰² where the melted glass is let into the exposed gold (Fig. 4). Cloisons are again used, not to contain cells of glass but as decorative accents, gilding the lily, so to speak, that is the ostentatious expanse of bare precious metal. Such conspicuous consumption served also as an instrument of foreign policy, for this was the technique employed in such elaborate gifts as the enamels that made up the Holy Crown of Hungary.¹⁰³

Apparently ever restless, Byzantine enamellers resorted in the twelfth century to a new sort of *Vollschmelz*, without abandoning, however, the dramatic impact of the Limburg reliquary. The new technique retained the effect whereby figures appeared to rise from the background, but accomplished this by silhouetting them against an overall, opaque base of enamel.¹⁰⁴ Although the gold is consequently once again concealed, some saving of labor could be achieved by firing the figure, the ground, and the inscriptions all at the same time. This move probably had little effect on the ultimate cost of the artifact, a step achieved, however, in the final evolution of this medium in Byzantium. In the twelfth or thirteenth century, copper began to replace the gold on which the enamel had traditionally been laid; the cheaper metal, cut from prefabricated strips, was likewise employed for the cloisons. This was already a standard technique in the West. In Byzantium it may well have been provoked by the increase in the number of enamel icons, objects six or more times the size of the medallions on which this technique is first encountered: their greater surface area would demand economy in the metal used. An example in the Hermitage Museum¹⁰⁵ is indubitably coarser to the modern eye than enamels of the "second golden age." We have no way of knowing if our response was shared by Byzantines of the Palaiologan era;¹⁰⁶ what is clear is that as late as 1200 the monk who drew up the inventory of St. John Theologos on Patmos looked very closely at an enameled icon of his monastery's patron and could

¹⁰² A. Frolov, *La relique de la Vraie Croix* (Paris, 1961), no. 135.

¹⁰³ E. Kovacs and Z. Lovag, *The Hungarian Crown and Other Regalia* (Budapest, 1980).

¹⁰⁴ Thus on a reliquary pendant of St. Demetrios in the British Museum (*Byzantium*, no. 200 [D. Buckton]) and another at Dumbarton Oaks (*DOCat* 2: no. 160). This is an instance in which we have two enamels apparently from the same shop. R. Cormack, *Writing in Gold: Byzantine Society and Its Icons* (London, 1985), 64, suggested that they were made in Thessalonike.

¹⁰⁵ A St. Theodore icon (19.6 × 16.5 cm), set into a larger panel with silver-gilt revetment (*Iskusstvo Vizantii v sobraniakh SSSR* [Moscow, 1977], 3: no. 544), here assigned to the 13th century.

¹⁰⁶ But cf. the famous observation by Nikephoros Gregoras (*Byzantina historia*, ed. L. Schopen and I. Bekker, 3 vols. [Bonn, 1829–55], 2:788) that (by 1347) leather and ceramic vessels used at the imperial table were made to look like precious metal.

describe the fine *Senkschmelz* technique whereby the saint's halo and book stood out against the gold in which they had been laid.¹⁰⁷

Ivory Carving

In almost every respect the history of Byzantine ivory carving differs from that of the craft that we have just looked at. First, while the heyday of enameling did not occur until the tenth century, medieval Greeks could, and almost certainly did, look back at a glorious past—the fifth and sixth centuries—when ivory had been much more readily available, when it was probably considerably cheaper and used for artifacts notably larger and much more diverse in function than the typical middle Byzantine production. Second, as opposed to an extended chronology in which examples of enamel are known from almost every century following the Triumph of Orthodoxy, at least the major pieces of carved ivory seem to have originated in a span of time no broader than the Macedonian dynasty,¹⁰⁸ and indeed, to be clustered for the most part in the middle and second half of the tenth century. Finally, unlike the series of technical mutations that characterized the production of enamel, Byzantine craftsmen did not arrive at any significant innovations in their manner of carving: three or four basic techniques¹⁰⁹ appear to have been practiced simultaneously, often within the confines of a single object.

Although these criteria do not add up to proof that ivory working was limited to Constantinople—where without doubt a series of important objects with imperial representations or close imperial associations originated—no basis, textual or archaeological, exists for the belief that any provincial site was a major center of ivory carving. Moreover, the very concentration of chronological and technical evidence suggests that the main body of work in this medium was the product of a sizable but close-knit community of craftsmen who, across one and a half centuries, had access to an exotic and surely expensive material. With the possible exception of Thessalonike, no center other than the capital would seem to offer the conditions necessary to create the body of often high-quality artifacts that is Byzantine ivory carving.

¹⁰⁷ Εἰκὼν ἁγία μεγάλη ὁ Θεολόγος . . . καὶ στεφάνου καὶ εὐαγγελίου τῶν ἀμφοτέρων χρυσοχρυσωμένων (Astruc, "Inventaire," 20, line 4).

¹⁰⁸ Differences of scholarly opinion have centered on the celebrated plaque depicting an emperor by the name of Romanos and his spouse Eudokia. The view that the emperor is Romanos II (959–963) was propounded by A. Goldschmidt and K. Weitzmann in their still-standard corpus, *Die byzantinischen Elfenbeinskulpturen des X.–XIII. Jahrhunderts*, vol. 2, *Reliefs* (Berlin, 1934), no. 34. The older opinion that the plaque represents Romanos IV Diogenes (1068–71) was revived, with new arguments, by I. Kalavrezou-Maxeiner, "Eudokia Makrembolitissa and the Romanos Ivory," *DOP* 31 (1977): 307–25. More recently the present author has returned to the opinion that Romanos II is represented and the plaque made sometime between his coronation as co-emperor at Easter 945 and Bertha-Eudokia's death in 949: A. Cutler, "The Date and Significance of the Romanos Ivory," in *Byzantine East, Latin West* (as above, note 44), 605–10. For our present purposes the import of the debates lies in whether this famous object is a work of the 10th or the 11th century, i.e., whether significant pieces of Byzantine ivory continued to be produced in the third quarter of the 11th century and, as some would believe, also in the 12th.

¹⁰⁹ For these, see Cutler, *Hand of the Master*, 110–19.

We have no absolute figures to document the cost of ivory either as a raw, imported¹¹⁰ substance or in its finished state. Its rarity and the value that this rarity implies can, however, be inferred from the evidence, primarily the artifacts themselves and, to a lesser degree, the all-but-total silence of the written sources concerning the availability or the uses made of the material in question. The fact remains that there are more than three hundred surviving examples of this craft,¹¹¹ a number that, given the incidence of losses in other media, demands some accounting.

The majority of extant pieces are icons or fragments of icons (single plaques, diptychs, or triptychs), objects of that Christian devotion which in itself offers some explanation for their preservation. In the secular realm, at least from the end of the ninth century, ivory was the material of choice for diptychs, possibly holding parchment codicils, presented by the emperor to his appointees.¹¹² Yet this use is insufficient to justify the frequently asserted existence of a “court workshop.” The very diversity in styles of carving, not to speak of variations in such mechanical aspects of production as hinges and closing devices, even on objects with aulic associations, suggests rather that ivory was handled by artisans in the city, much as we have seen in the case of imperial commissions for painted icons.¹¹³ Moreover, this same diversity argues not for large, organized workshops but for many individual craftsmen working with at most one or two apprentices.¹¹⁴ Unlike monumental painting and metalworking, the carving of ivory does not require a team of assistants to prepare the raw material, nor does it involve tasks that had to be performed in quick succession by separate pairs of hands: there were no ladders to move, no lime base to be kept wet, no melt to be maintained at a proper temperature. Both the rational organization of the means of production and the maximization of profits from a process designed to create *unica* militate against the notion of ateliers which, in Gothic Paris for example, turned out long series of virtually identical pieces.

This is not to deny a general resemblance among Byzantine products in this medium. The same normative forces exerted by a largely homogeneous clientele on the

¹¹⁰ On the basis of tusk measurements, I have argued that late antique and Byzantine plaques wider than 11–12 cm derived from elephants of African origin: see A. Cutler, *The Craft of Ivory: Sources, Techniques, and Uses in the Mediterranean World, A.D. 200–1400* (Washington, D.C., 1985), 20–24. This has been disputed by F. von Bahren, “Zur Materialkunde und Form spätantiker Elfenbeinpyxiden,” *JbAC* 37 (1994): 56–57, on the grounds that sporting record books list Indian elephants shot in the 20th century as yielding tusks up to 21 cm in diameter.

¹¹¹ This number differs from the total contained in the two volumes of Goldschmidt and Weitzmann, *Elfenbeinskulpturen*. It is arrived at by subtracting objects that are not demonstrably Byzantine and adding pieces of which they were unaware.

¹¹² For these *πλάκες ἐλεφάντιναι κεκοσμημέναι*, see N. Oikonomides, *Les listes de préséance byzantines des IX^e et X^e siècles* (Paris, 1972), 92, line 23; 95, line 23. The uses described in the *Kletorologion* of Philotheos seem to be confirmed by *De cerimoniis*, 249, line 22; 251, lines 3–4; and 260, line 15 (this last with reference to the patriarch of Constantinople). For a possible surviving example, see Cutler, *Hand of the Master*, figs. 24–25.

¹¹³ See note 57 above.

¹¹⁴ By this means, too, craft techniques would have been transmitted from one generation to the next. Large “groups” of ivories, and implicitly craftsmen, is the premise of Goldschmidt and Weitzmann, *Elfenbeinskulpturen*. For the arguments against this thesis, see Cutler, *Hand of the Master*, 66–73.

makers of objects in other media bore equally on workers in ivory. Such iconographical variants as exist—the prominence given, for example, to a particular saint—may signify the identity of the commissioner, in which case we are not entitled to speak of a “market” in the sense of a locus where a client could acquire a ready-made piece that happened to please him or her. If such a market existed, it would be for objects, often in bone, that derived from prototypes fashioned in the more expensive material (Fig. 5).¹¹⁵ Bone, available whenever animals were slaughtered for meat or parchment, was both locally available and cheaper. It was also softer and therefore faster and easier to work, all good reasons why it was the preferred material for the large number of boxes with so-called mythological subject matter that survive from the tenth and eleventh centuries;¹¹⁶ since bone was not subject to the constraints and competition that appear to have interrupted Byzantine imports of ivory before the Fourth Crusade,¹¹⁷ caskets clad in this material could have continued to be made in and after the twelfth century. On the other hand, the presence of strips of bone ornament on boxes that were otherwise adorned in ivory suggests once again how precious this latter material was, even before the diversion (to Italian cities?) of the regular commerce in elephant tusks.¹¹⁸

If the value of ivory in the middle Byzantine world was as high as is suggested by craftsmen’s readiness to work material lower in quality than that used in the late antique world, and to substitute cheaper bone for it, there remains the question why objects of ivory should be listed so infrequently in ecclesiastical and monastic inventories or the wills of private individuals.¹¹⁹ Apart from the reinforcement that this relative silence provides for the general thesis of rarity outlined above, it must be remembered that ivory is not “liquid” in an economic sense. Plaques could be detached from their original settings and removed, as they often were to the West occasionally before, and much more often after, the thirteenth century,¹²⁰ but they could not be melted down or even recarved in any satisfactory manner. Highly important as devotional images or

¹¹⁵ Examples of such derivatives include the bone-clad “Apostles Casket” at Dumbarton Oaks, a reduced version of an iconographically similar box, with plaques of ivory, now in the Bargello in Florence.

¹¹⁶ Thus a box formerly in Vienna (A. Goldschmidt and K. Weitzmann, *Die byzantinischen Elfenbeinskulpturen des X.–XIII. Jahrhunderts*, vol. 1, *Kästen* [Berlin, 1930], no. 28) freely depends upon the celebrated Veroli Casket in London (*ibid.*, no. 21). See A. Cutler, “*Ehemals Wien: The Pula Casket and the Interpretation of Multiples in Byzantine Bone and Ivory Carving*,” *Römische Historische Mitteilungen* 41 (1999): 117–28.

¹¹⁷ The only certainly Palaiologan ivory known is a tiny circular box in Washington, D.C., for which see N. Oikonomides, “John VII Palaeologus and the Ivory Pyxis at Dumbarton Oaks,” *DOP* 31 (1977): 329–37.

¹¹⁸ To my knowledge, the presence of “denti di leofante” in Venetian trade is first attested by F. Balducci Pegolotti, *La pratica de la mercatura*, ed. A. Evans (Cambridge, Mass., 1930), 141, but since tusks traveled most likely as ballast in ships hauling other commodities, they could well have reached Italian ports before the 14th century. Probably for this reason, too, ivory is not recorded in documents of the *kommerkiarioi*.

¹¹⁹ The rare exceptions are listed by Cutler, *Hand of the Master*, 20.

¹²⁰ Generally on this question, see A. Cutler, “From Loot to Scholarship: Changing Modes in the Italian Response to Byzantine Artifacts, c. 1200–1750,” *DOP* 49 (1995): 237–67.

objects of pleasure as they may have been, ivory carvings would be of lesser concern to those who, before the age of art collecting, drew up legal or commercial documents.

Book Illumination

In light of N. Oikonomides' chapter ("Writing Materials, Documents, and Books," in this volume),¹²¹ little further needs to be said about book production. This postscript to my chapter on the industries of art is therefore concerned only with economic issues raised specifically by the adornment of manuscripts and the possession of artifacts finished in this way. It would be an exaggeration to say that the difference between an embellished book and one lacking in such decoration is expressed by the contrast between the 500 nomismata that a fifth-century jeweler is said to have taken to adorn a Gospel book with precious stones and mother of pearl¹²² and the 12 nomismata paid for a (presumably) undecorated Gospel book in the Life of St. Lazaros of Mount Galesios (d. 1053).¹²³ But the antithesis points in the right direction, even though the data on the earlier book refers to its cover, not its contents, and the difference is a matter of the cost of materials and not of chronology.

Elaborately bound books are not the issue here, but when the vast preponderance of undecorated books is taken into account,¹²⁴ a book like the lectionary Sinai gr. 204, written entirely in gold on smooth white parchment measuring more than 28 × 21 cm and with five full-page pictures in gold,¹²⁵ may have been taken as a sign of only slightly less luxury. That illumination was considered part of a book's magnificence is clear from Eustathios Boilas' description of the *evangelion*—"my highly prized, or rather my priceless treasure"—that he bequeathed to his monastery. Again written in gold, in addition to its enameled ornament it had painted initials and images of the Evangelists and the Nativity.¹²⁶ It is evident (and hardly surprising) that Boilas knew well the book that he had paid for,¹²⁷ but limited awareness of the contents of other manuscripts is implied by their pristine condition. A copy of the liturgical homilies of Gregory of

¹²¹ See *EHB*, 589–92.

¹²² O. Lampsides, "Βατικανοὶ κώδικες περιέχοντες τὸν βίον ἁγίου Ἰωάννου τοῦ Καλυβίτου," *Ἀρχαῖον Πόντου* 28 (1966): 7, lines 6–8.

¹²³ *AASS*, Nov. 3:514F.

¹²⁴ For example, fewer than fifty of the more than two thousand surviving lectionaries are illustrated. On this and similar calculations, see J. Lowden, "Luxury and Liturgy: The Function of Books," in *Church and People in Byzantium*, Twentieth Spring Symposium of Byzantine Studies, Manchester, 1986 (Birmingham, 1990), 263–80, esp. 267, 275.

¹²⁵ K. Weitzmann and G. Galavaris, *The Monastery of Saint Catherine at Mount Sinai: The Illuminated Manuscripts* (Princeton, N.J., 1990), 1: no. 18. With reference to a much larger manuscript, Paris, Bibliothèque Nationale, gr. 510, I. Hutter, "Decorative Systems in Byzantine Manuscripts, and the Scribe as Artist: Evidence from Manuscripts in Oxford," *Word and Image* 12 (1996): 10, speaks of "several ounces of gold lavishly distributed over every page." Given that the gold foil employed in most Byzantine illumination is rarely more than 2 microns (.0002 mm) thick, this must be taken as a dramatic exaggeration.

¹²⁶ Lemerle, *Cinq études*, 24, line 24–25, line 21.

¹²⁷ Unfortunately, he does not report the cost of this or any other of his books, in contrast to the round number of 300 nomismata that he cites as the cost of his gold-inlaid processional cross, a silver-plate example of the same type of object, and other liturgical furnishings (*ibid.*, 24, lines 119–25).

Nazianzos, Sinai gr. 339,¹²⁸ illuminated on almost every one of its 437 pages just before the middle of the twelfth century, shows no traces of candle soot, grease, or other signs of use.¹²⁹ Richly illustrated lectionaries, by their very nature, were not utilitarian works but emblems of splendor, ceremonially borne by a deacon during the Little Entrance and placed ultimately on the altar together with the cross. In a manner akin to that of the sixth-century Vienna Genesis (Österreichische Nationalbibliothek, theol. gr. 31), their text was greatly abbreviated to allow space for the pictures.

This proportional relation between text and images appears to imply a calculated synergy between scribe and painter. But cooperation of this sort, with its implications for craft specialization, hardly seems to have obtained before the tenth century.¹³⁰ Even thereafter we find professional scribes like John Tzoutzounas decorating the books they had copied.¹³¹ The cases of Theodore, the artist-scribe of the Stoudios Psalter in London (British Library, Add. 19.352) of 1066 and, somewhat later, Theophanes, who copied and painted the canon tables and a picture showing himself offering his book to the Virgin (National Gallery of Victoria 710/5; Fig. 6),¹³² are better-known examples of one pair of hands at work on all stages in the production of a manuscript. The Palaiologan period offers similar examples, ranging from professional scribe-illuminators¹³³ to monks performing the same set of tasks.¹³⁴

Whether or not this sort of vertical integration of the means of production represented an economy for the client is unknown. What is sure is that no later than the tenth century, when the full-page pictures of the Paris Psalter (Bibliothèque Nationale, gr. 139) were prepared independently of the text,¹³⁵ painters were hired to decorate areas reserved in books for titles, headpieces, and historiated initials. In the eleventh century, changing relations between teams of scribes, painters, and their assistants can be observed, though perhaps not established with certainty, across a succession of books.¹³⁶ This capacity to supply professional embellishment answered a need, a demand for polychrome brilliance that either was coeval with or swiftly followed the demonstration of such effects in mosaic and enamel decoration. Komnenian owners

¹²⁸ Weitzmann and Galavaris, *Illuminated Manuscripts*, no. 56.

¹²⁹ Lowden, "Liturgy and Luxury," 271 and fig. 46, contrasts this with a well-worn Gregory manuscript in Moscow, State Historical Museum, gr. 146. For most sumptuous lectionaries, we must assume that parallel working copies were used in the bema.

¹³⁰ Hutter, "Decorative Systems," 9–10.

¹³¹ I. Hutter, "Oxford Marginalien," *JÖB* 29 (1980): 344–54. Tzoutzounas produced two Praxapostoloi in 1087 and 1092, respectively, an Octateuch (Vienna, Österreichische Nationalbibliothek, theol. gr. 57), and a Psalter (Oxford, Bodleian Library, Cromwell 9) among other books.

¹³² R. S. Nelson's challenge to the belief that Theophanes, the donor of the Melbourne manuscript, was himself the scribe and painter of the book ("Theoktistos and Associates in Twelfth-Century Constantinople: An Illustrated New Testament of AD 1133," *J. Paul Getty Museum Journal* 15 [1987]: 64 n. 59) has recently been adequately answered by Hutter, "Decorative Systems," n. 24.

¹³³ Nelson, *Theodore Hagiopetriles*.

¹³⁴ Notably, if clumsily, Ioasaph II of the Hodegon monastery in Constantinople.

¹³⁵ H. Buchthal, "The Exaltation of David," *JWarb* 37 (1974): 330–33.

¹³⁶ J. C. Anderson, "Cod. Vat. 463 and an Eleventh-Century Painting Center," *DOP* 32 (1978): 177–96; idem, "The Seraglio Octateuch and the Kokkinobaphos Master," *DOP* 36 (1982): 83–114.

were willing to pay for the addition of newly painted leaves to older books;¹³⁷ at the same time, older images were recycled for use in books written as much as two centuries later.¹³⁸ Especially in the Palaiologan era, pictures were inserted into books never originally intended to display *kosmesis* of this sort.¹³⁹

The employment of professional painters and the passion for polychrome decoration—phenomena far less evident in early Byzantine manuscripts—probably went hand in hand, with the latter providing the impetus for the former. This synchronous development must have strained the material resources of an economy more accustomed, for example, to use the cochineal derived from the *coccus* insect for the dyeing of textiles than for the red lake used in book illumination. While verdigris, the pigment made by treating copper with vinegar, could have been produced in an urban context, the scarlet that came from cochineal depended upon rural, entomological enterprise;¹⁴⁰ the huge number of insects required to produce a useful amount of pigment helps to explain the costliness of decorated books.

At the same time, the widespread sources of the colors used¹⁴¹ offers some explanation for the geographical diversity that characterizes the production of illuminated manuscripts in Byzantium. The above-mentioned John Tzoutzounas worked somewhere in the Aegean theme.¹⁴² Books with pictures in the so-called Decorative Style, their images half eaten away by the acidic verdigris favored by its painters, have been placed in Cyprus or Palestine, not in Constantinople.¹⁴³ Better than any other medium, book illumination makes the case that the production of art in Byzantium and the economic incentives and rewards that it yielded were not limited to industries resident in the capital.

¹³⁷ Thus the Gospel book London, Burney 19 (*Byzantium*, no. 176 [J. Lowden]), written in the second half of the 10th century, acquired evangelist portraits in the second quarter of the 12th.

¹³⁸ Thus Princeton, University Library, Garrett 6 (*Illuminated Greek Manuscripts from American Collections*, ed. G. Vikan [Princeton, N.J., 1973], no. 1).

¹³⁹ For examples, see J. Lowden, "Observations on Illustrated Byzantine Psalters," *ArtB* 70 (1988): 249.

¹⁴⁰ Similarly a rural product of the Peloponnese and the Levant was the dried saffron, which, soaked in water or glair, yielded a yellow that could substitute for orpiment (a sulphide of arsenic traditionally used to simulate gold in book production).

¹⁴¹ For a useful survey of the metallic and vegetable sources of pigments, see James, *Light and Colour*, 28–31.

¹⁴² Hutter, "Oxford Marginalien," 352.

¹⁴³ A. W. Carr, *Byzantine Illumination, 1150–1250: The Study of a Provincial Tradition* (Chicago, 1987).

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Writing Materials, Documents, and Books

Nicolas Oikonomides

Three kinds of writing materials were used in Byzantium: papyrus, parchment, and paper. For rough work, slates (πινακίδια) were used and were often covered with wax. Papyrus (ξύλοχαρτιον), mainly from Egypt, was still being imported into Constantinople by the shipload in the tenth century and was regarded as the choicest of materials, by way of contrast with other (locally made?) products. Books and documents were written on it, even by the imperial secretariat (the famous Saint Denis papyrus is an imperial epistle of the 9th century). The last chrysobull known to have been written on papyrus is the *Typikon* of Gregory Pakourianos of 1083. In the late twelfth century, Eustathios of Thessalonike complained of the “recent” disappearance of papyrus.

Parchment was the most expensive writing material. The skin of a large lamb would produce two, or at the most three, rectangular leaves of parchment, which when folded in two would make the four (or six) leaves of a manuscript. In the tenth century, each skin of this kind, which would sometimes need to be used in full just to record a contract, cost approximately one silver miliaresion ($\frac{1}{12}$ of a nomisma).

The parchment was often prepared under the supervision of the future user. The monastery of Stoudios, which had a famous scriptorium in the ninth century, had its own *membranarion*, where monk-parchment makers worked. The occupation of parchment maker is not mentioned in the *Book of the Eparch*, possibly because of the limited economic importance of parchment compared to the other uses of animal skins. Michael Choniates refers to large-scale exports of parchment to the West in the late twelfth century. In the thirteenth century, scholars who used parchment were obliged to import it themselves from the provinces; since parchment was a seasonal product, it was not always possible to find the desired quality. There were frequent shortages in Constantinople, especially in the winter months, while supplies were easier to obtain after Easter. After the fourteenth century, however, the pieces of parchment become more regular in shape, indicating that the product had to some extent become standardized and thus commercialized.

Paper, a Chinese invention, came to the attention of the Arabs in 751, and its use

became compulsory in the secretariat of the caliphate around 800. The earliest surviving Greek manuscript on paper, Codex Vaticanus 2200, also seems to have been written around 800, in the Arab-dominated East. Paper manuscripts survive from the eleventh century on. The earliest surviving Greek document on paper dates possibly from 1016 and certainly from 1052 (*Actes de Lavra*, no. 20, 31). The use of paper was thus introduced into Byzantium certainly in the tenth century, and possibly in the ninth, when there is a reference to a tax charge called *chartiatika* (χαρτιάτικα). There are also references to “paper makers” *chartopoioi* (χαρτοποιοί). In the first quarter of the ninth century, there were paper makers (not to be confused with parchment makers) in the monastery of Stoudios, which had a large scriptorium, and in the tenth century paper makers holding honorary titles are found in the Peloponnese; it would seem that they were suppliers to the court. We also possess the seal of a “*komes* of paper makers,” who must surely have been a state official. I think it possible that these were manufacturers of paper for Byzantium, but this view has been questioned.

The first paper we find in Byzantium is of the Oriental type (called *bombykinon* or *bambakeron*) and cotton based in two different qualities and without a watermark. Paper of this type continued to be used in the Byzantine world until the fifteenth century, in parallel with western-type paper, with a watermark, imports of which into the East from Italy began in the thirteenth century, flooding the Byzantine market in the fourteenth century thanks to its mass production.

Paper was always cheaper than parchment, perhaps half the price, or even less; and in the fourteenth century it became still less expensive. On the other hand, it was not so strong. To judge from the surviving documents, paper seems to have been used almost exclusively in the eleventh and twelfth centuries by the imperial secretariat and by private individuals almost throughout the empire, with the exception of Macedonia, where parchment always prevailed. In 1204, however, things changed, and parchment was the rule everywhere (including the imperial secretariat) for three-quarters of a century. By the middle of the fourteenth century, paper once more dominated everywhere. A study of manuscripts reveals the same fluctuations in the use of paper. In 1200, 20% of the manuscripts of Patmos were on paper, but the constant wear that they suffered meant that by 1307 only 8.3% of the manuscripts in the same library were on paper.

The material on which it was written was an element of decisive importance in the value of the manuscript. We sometimes find leaves of parchment and paper together in the same manuscript, in an attempt to combine the strength of the former with the low cost of the latter. As a result of the relative scarcity of writing materials, people tended to use the blank leaves at the beginning and end of the manuscripts to make notes and write out contracts. When the shortages were even greater, many people ignored the prohibitions of the synods and erased the writing on earlier parchment manuscripts, replacing them with fresh texts. These manuscripts are called palimpsests, and they become more common during the thirteenth century.

The greatest single item of expense connected with manuscripts was, of course, the



1. St. John the Evangelist as a scribe. National Library, Athens, cod. 57, fol. 265v (11th century) (after A. Marava-Chatzinikolaou and C. Toufexi-Paschou, *Κατάλογος μικρογραφιών βυζαντινών χειρογράφων της Ἐθνικῆς Βιβλιοθήκης τῆς Ἑλλάδος* [Athens, 1978], 1: pl. 219)

fee of the copyist, who would have to devote several months of work to his task. In the tenth century, we can calculate that the cost of the parchment represented between 23% and 38% of the total value of a book, depending on how densely written it was. That total value fluctuated around 21–26 gold pieces. We know of professional copyists who earned considerable sums of money from their work: Athanasios Thaumaturgos earned 900 gold nomismata in twenty-eight years (32 nomismata per annum). There is a reference to a copyist who, by contract, undertook to copy a manuscript for a fee of 150 gold nomismata. Often enough, though, the copyist would also have another occupation, being a monk, a priest, a professional contract writer, or a civil servant. In other cases, the scholars themselves copied the manuscripts they needed for their personal libraries.

References are found elsewhere to prices of this order, and to much lower fees: as little as one gold coin. These variations are accounted for, among other things, by the dimensions of the manuscript, its ornamentation with gold lettering or miniatures, whether or not there was musical notation (which might account for up to one-third of the total value of the book), and whether or not it was to be given a deluxe binding (we know that in the 11th century an ordinary binding cost $\frac{1}{3}$ of a gold coin). Unrealistic prices are also quoted in special circumstances, such as when the manuscript was used as security for a debt. Extremely low prices were the rule when the manuscripts were plunder of war and were being sold by illiterate soldiers.

Under normal conditions, however, the purchase of a book was a major item of expenditure, as can be seen if we compare the price of a book in the tenth century (21–26 gold nomismata) with that of a cow, a warhorse, and a mule at the same period (3, 12, and 15 gold nomismata, respectively), or with the annual salary (*πόγα*) of a *protospatharios* (an official whose post automatically gave him membership in the senate), which was 72 gold pieces.

Books seem to have been written to order, commissioned by individuals or groups of individuals who wished to contribute to the common good (e.g., by purchasing a book for the church). There is no evidence of there having been a free market in new books or of the existence of bookshops—understandably enough, if one remembers the level of the investment represented by a book and the limited number of prospective purchasers. On the other hand, sales and purchases of secondhand books were common, as were other transactions such as pawning. The existence of some series of identical manuscripts with the same content and the same pagination (e.g., copies of the *Synopsis Basilicorum*) allows us to conclude that “editions” were available of certain books addressed to a specific readership, in this case jurists. However, we do not know how the marketing of these books took place.

There are references to large private libraries, including those of Eustathios Boilas (78 books, 1059), Michael Attaleiates (54 books, 1079), Theodore Skaranos (14 books, 1274), and to still larger monastic libraries with many hundreds of books, such as those of the Patmos monastery and of the Great Lavra on Mount Athos. Some of these libraries lent books out to meet the needs of entire geographical areas.

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Pottery and Glass in Byzantium

Véronique François and Jean-Michel Spieser

Though pottery and glass are in some ways related, it is not clear that they share sufficiently similar conditions of manufacture, diffusion, or use to allow these aspects to be discussed in conjunction. Pottery appears to have been used in the greater quantity, or is at least found more frequently, and, while glass could well have been a luxury product, pottery practically never was such in the Byzantine world. In addition, research into pottery is further advanced than into glass.

Generally speaking, glassmaking has been neglected for even longer than pottery, both in works on Byzantine art and by archaeologists. Our picture of glassmaking in Byzantium has been drawn from a very small sample of sumptuous vases, from the products of neighboring civilizations, and from a few written sources and is still imprecise and patchy. It is based on rare preserved pieces, which means that problems of attribution have not been resolved, in particular the distinction between Byzantine and Islamic glasses, and less luxurious products have been neglected, although they are certainly more numerous. The study of glass must now take account of material found during archaeological excavations, which is not as neglected as it used to be, to fill out and correct our knowledge of the history of glass in the years to come. In the case of pottery, on the other hand, although we have a long way to go before we know as much as we do about pottery in the classical Roman world and in late antiquity, recent years have seen significant developments, and archaeologists who find Byzantine pottery now have a new set of publications to which to refer.¹

This chapter was translated by Sarah Hanbury Tenison.

¹ In the case of glass, the most recent study is by J. Henderson and M. M. Mango, "Glass at Medieval Constantinople: Preliminary Scientific Evidence," in *Constantinople and Its Hinterland*, ed. C. Mango and G. Dagron (Aldershot, 1995), 333–56. See also J. Philippe, *Le monde byzantin dans l'histoire de la verrerie* (Bologna, 1970). In the case of pottery, D. Talbot Rice, *Byzantine Glazed Pottery* (Oxford, 1930), and C. H. Morgan, *The Byzantine Pottery*, Corinth 11 (Cambridge, Mass., 1942), are still authoritative, to which can now be added Ch. Bakirtzis, *Βυζαντινὰ τσουκαλολάγνα* (Athens, 1989); V. Déroche and J.-M. Spieser, eds., *Recherches sur la céramique byzantine*, BCH, Suppl. (1989); V. François, *La céramique byzantine à Thasos* (Paris, 1995); S. Gelichi, ed., *La ceramica nel mondo bizantino tra XI e XV secolo e i suoi rapporti con l'Italia* (Florence, 1993); J. W. Hayes, *Excavations at Sarāḡhane in Istanbul*, vol. 2 (Princeton, N.J.–Washington, D.C., 1992), also important for glass; J.-M. Spieser, "La céramique byzantine médiévale," in *Hommes et richesses dans l'Empire byzantin*, 2 vols. (Paris, 1989–91), 2:249–60;

Glass and Its Production

Prior to the period under discussion, glass production in Byzantium did not deviate from the traditions of the later empire.² We know nothing about the workshops that existed then. Glassmakers were among the number of craftsmen granted exemption from taxes by Constantine.³ Excavations at Saraçhane have revealed three particular types that were important in terms of quantity—wine glasses, lamps, and three-handled lamps—suggesting that these were produced locally during the sixth and seventh centuries.⁴ Nevertheless, it is still difficult to discern the position of the capital in relation to the glass industry. The best-known products are from Syria and Palestine in the fifth to seventh centuries, including flasks of blown glass with molded decorations depicting Christian or Jewish symbols.⁵ Elsewhere, excavations in Sardis, like those at Caričin Grad, have produced new information about ordinary glass products in the sixth and seventh centuries; four thousand fragments of glass vases, which were probably manufactured on the spot, have been found at Sardis.⁶

Shapes

Byzantine glass was produced for a variety of functions. Besides the different types of glass receptacle, flat glass and tesserae for mosaics constituted an important part of glass production. Indeed, glass was essential to the art of Byzantine mosaics, which used colored glass tesserae abundantly all over the empire from the sixth to the fourteenth century. Very large quantities of tesserae were required, for instance, to decorate the great monuments in Constantinople and were presumably manufactured in large

idem, *Die byzantinische Keramik aus der Wohnstadtgrabung*, (Berlin, 1996), and D. Papanikola-Bakirtzi, Μεσαιωνική έφθαλωμένη κεραμική της Κύπρου (Thessalonike, 1996), to cite but the most recent works.

² D. B. Harden, "Ancient Glass, III: Post Roman," *AJ* 128 (1972): 78–83, 92, 98–101. See also J.-P. Sodini, "L'artisanat urbain à l'époque paléochrétienne," *Ktema* 4 (1979): 71–119 (on glass, 92–94).

³ *CTh* 13.4.2 (text republished in *CI* 10.66.1): see Sodini, "Artisanat Urbain," 92 and 103. A text that refers specifically to the glassmakers of Constantinople does not appear to exist. This presumed evidence for glass workshops in Constantinople has slipped into the bibliography on the basis of a wrongly interpreted sentence in Philippe, *L'histoire de la verrerie*, 17. Similarly, reference to a glassmakers gate at Constantinople goes back to E. Garnier, *Histoire de la verrerie et de l'émaillerie* (Tours, 1886), 56: this is, in fact, the gate leading onto the Golden Horn, which is called Cubalıkapi (R. Janin, *Constantinople byzantine* [Paris, 1964], 290) or Cibalıkapi (W. Müller-Wiener, *Bildlexikon zur Topographie Istanbuls* [Tübingen, 1977], 311, fig. 356), near which Pierre Gylles (taken up in Ducange, *Constantinopolis cristiana* [Paris, 1682], 1.14.7) mentions glass workshops, which does not allow us to assume that they existed during the Byzantine period, especially not during later antiquity.

⁴ Hayes, *Saraçhane*, 400.

⁵ C. Meyer, "Glass from the North Theater Byzantine Church and Soundings at Jerash, Jordan, 1982–1983," *BASOR*, suppl., 25 (1988): 175–222; J. Patrich, Y. Tsafrir, and R. H. Brill in Y. Tsafrir et al., *Excavations at Rehovot-in-the-Negev*, vol. 1, *The Northern Church* (Jerusalem, 1988), 134–51; R. H. Smith and L. P. Day, *Pella of the Decapolis* (Wooster, Ohio, 1989), 2:37–38, 110, 114–15.

⁶ A. von Saldern, *Ancient and Byzantine Glass from Sardis* (Cambridge, Mass., 1980). For Caričin Grad, see B. Bavant, "Les petits objets," in B. Bavant, V. Kondić, and J.-M. Spieser, *Caričin Grad*, vol. 2, *Le quartier Sud-Ouest de la ville haute* (Belgrade, 1990), 208–12.

workshops. C. Mango estimates the number of glass cubes required to produce the mosaic in Monreale at one million.⁷ Given an estimated weight of 5 g for the average tessera, this would have represented a production of 5 tons of glass. A similar calculation for Hagia Sophia would certainly give a weight of glass well over 400 tons for the tesserae that were used in the Justinianic period.⁸ Some expertise must also have been required in their manufacture, since the mosaic craftsmen who set off to work for al-Walid, and those sent by Nikephoros II to the emirate of Cordoba to decorate the mosque there, took their own supplies of tesserae with them.⁹

Further evidence that glass was used to decorate buildings is provided by some glass tiles that were intended to cover a wall and that have been attributed to northern Syria in the tenth to twelfth centuries.¹⁰ Quantities of blue and green tiles have also been found in Sardis dated to the seventh century and in Church E to the thirteenth.¹¹ In Constantinople, at the sites of the Pantokrator church (Zeyrek Camii) and the Chora church (Kariye Camii), finds of fragments of historiated painted glass windows and of stained glass windows, together with many lead strips, provide a splendid illustration of the art of Byzantine stained windows.¹² These fragments were initially attributed to a workshop in Constantinople at the beginning of the twelfth century—1120 for Kariye Camii and 1126 for Zeyrek Camii—then it was claimed that the Pantokrator's windows had been executed during the Latin occupation and, if not by a German glass window painter, at least by one directly influenced by Germany.¹³ However, recent chemical analysis of fragments of window glass from Kariye Camii has shown that they belong to an entirely different tradition from that of central Europe and could have been manufactured locally.¹⁴

Not much is known about the production of window glass, although there is plenty of evidence that it was used during the early Byzantine period.¹⁵ In the same way, nothing is known about the places where or the conditions under which glass jewelry was produced; this included amulets of molded glass, bracelets of spun glass, small jewels, and fake cameos, all of which constitute a significant part of glass finds.

With regard to hollow glass wares, the most commonly found shapes are well known:

⁷ According to "Commerce et artisanat en milieu urbain," conference held at the Collège de France, Paris, December 1986, cited by Henderson and Mango, "Glass at Constantinople," 339, no. 24.

⁸ For the weight of the gold used for the mosaics in Hagia Sophia, cf. A. Cutler, "The Industries of Art," *EHB* 557–58.

⁹ In 706–707, the mosaic artists set off with "forty loads (mules? camels?)," according to the *Kitab al-Dahair*. See M. Hamidullah, *Arabica* 7 (1960): 285. We thank A. Cutler for this reference.

¹⁰ J. Durand, *Byzance: L'art byzantin dans les collections publiques françaises* (Paris, 1992), 303, no. 217.

¹¹ Von Saldern, *Glass from Sardis*, 91–92, and 101 (for Church E); J. S. Crawford, *The Byzantine Shops at Sardis* (Cambridge, Mass., 1990), 78–81. Cf. C. Foss and J. A. Scott, "Sardis," *EHB* 617, 620.

¹² A. H. S. Megaw, "Notes on Recent Work of the Byzantine Institute in Istanbul," *DOP* 17 (1963): 349–67.

¹³ J. Lafond, "Découverte de vitraux historiés du Moyen Age à Constantinople," *CahArch* 28 (1968): 231–38.

¹⁴ Henderson and Mango, "Glass at Constantinople," 348–56.

¹⁵ Cf. Bavant ("Les petits objets," 192 n. 2) for the buildings with glass windows in Caričin Grad.

slightly concave cups of varying depths, small cylindrical flasks, drinking glasses, and long-necked bottles. Glass lamps, especially in the shape of goblets to fit into church candelabra, were widespread. All these forms were common to the whole of the Mediterranean basin. These glass wares were, generally speaking, luxury goods. Some were stained, sometimes decorated with paintings, in which gold and polychrome enamels were also used to trace the outlines of foliage embellished with animals or people inscribed within medallions.¹⁶ Of the best-known pieces, a purple enameled glass in the San Marco Treasury in Venice is famous for its ornamentation, which displays antique motifs alongside kufic characters. A. Grabar attributes it to a Constantinopolitan workshop during the Macedonian period.¹⁷ However, the overall scarcity of enameled fragments among finds at Saraçhane and elsewhere in Constantinople (two fragments of cups and a bottle), has led J. Hayes to question the existence of workshops producing this type of glass in the capital.¹⁸ We should also mention the cylindrical flasks, decorated with zoomorphic and geometrical designs arranged in bands, that have been found in Corinth,¹⁹ Cyprus,²⁰ and again in Novogrudok in northwestern Russia.²¹ They are dated to the eleventh century, to the end of the twelfth, and to the beginning of the thirteenth century respectively. Other types of glass were produced, perhaps in the capital during the eleventh century: vases with disks, lamps, cups, and goblets of thick transparent glass, their surfaces decorated with disks in relief, points, or concave circles (Fig. 1). There are also other vases decorated more simply with a thread of spun glass trailed over the whole surface, or sometimes bristling with little projecting blobs arranged in bands.²²

Production Techniques

Both the written and the material documentation is poor, although the *Diversarum artium schedula*, compiled by the German monk Theophilus,²³ does provide some indications about manufacturing procedures in Byzantine glassmaking in the eleventh and twelfth centuries. The "Miracles of Saint Photeine" (9th–10th centuries) mentions a fire that started in a glass workshop situated on a road leading from Strategion to Hagia Sophia.²⁴ This is the only known reference to glass production in Constantinople during the Byzantine Middle Ages.

¹⁶ A. Grabar, "La verrerie d'art byzantine au Moyen Age," *Mon Piot* 57 (1971): 89–127.

¹⁷ See A. Cutler, "The Mythological Bowl in the Treasury of San Marco at Venice," in *Near Eastern Numismatics, Iconography, Epigraphy and History: Studies in Honor of George C. Miles*, ed. D. K. Kouymjian (Beirut, 1974), 236–54, and I. Kalavrezou-Maxeiner, "The Cup of San Marco and the 'Classical' in Byzantium," in *Studien zur Mittelalterlichen Kunst, 800–1250: Festschrift für Florentine Mütterich zum 70. Geburtstag*, ed. K. Bierbrauer, P. K. Klein, and W. Sauerlander (Munich, 1985), 1:167–74.

¹⁸ Hayes, *Saraçhane*, 401.

¹⁹ G. R. Davidson, "A Medieval Glass Factory at Corinth," *AJA* 44.3 (1940): 318, 320, figs. 20–21.

²⁰ A. H. S. Megaw, "A Twelfth-Century Scent-Bottle from Cyprus," *JGS* 10 (1968): 83–104.

²¹ See Grabar, "La verrerie."

²² Davidson, "Glass Factory," 308–16.

²³ Theophilus, *Essai sur divers arts*, trans. A. Blanc and J. J. Bourassé (Paris, 1980).

²⁴ F. Halkin, ed., *Hagiographica inedita decem*, 21 (Turnhout, 1989), chap. 9, pp. 111–25 (cf. 122–24). See Henderson and Mango, "Glass at Constantinople," 346, and R. B. Mason, "Glazed 'Tiles of



1. Shallow glass bowl. Venice, St. Mark's Treasury (after A. Grabar, "La verrerie d'art byzantin au Moyen Age," *Mon Piot* 57 [1971]: 107, fig. 19)



2. Glass fragments (after Gladys R. Davidson, "A Medieval Glass Factory at Corinth," *AJA* 44.3 [1940]: fig.11)



3. Corinth, Fine Sgraffito plate
(after C. H. Morgan,
The Byzantine Pottery.
[Cambridge, Mass., 1942], 118,
fig. 92, no. 969)



4. Corinth, Fine Sgraffito
plate (after Morgan, *Byzantine
Pottery*, 119, fig. 93, no. 965)

5. Zeuxippus ware.
Hermitage x. 728
(after A. H. S. Megaw,
"Zeuxippus Ware," *BSA*
63 [1968]: pl. 20a)



6. Receptacle, Aegean
ware. Sèvres, Musée
national de la
Céramique, MNC
24782 (after J. Durand,
*Byzance: L'art byzantin dans
les collections publiques
françaises* [Paris, 1992],
394, no. 303)





7. Vases deformed by excessive heat in the furnace (after D. Papanikola-Bakirtzi, *Μεσαιωνική Εφυσλωμένη Κεραμική της Κύπρου* [Thessalonike, 1996], pl. xxx)

In 1937, two glass workshops dating from the eleventh to twelfth century were discovered in Corinth and provided important technical clues, in spite of being attributed for a long time to Greek artisans from Egypt. However, now that the Corinth excavation has been reexamined and the data linked to finds of medieval glasses in Tarquinia and southern Italy, the chronology of the workshops and the origin of their craftsmen are being reassessed.²⁵ D. Whitehouse has demonstrated that these workshops were active in the thirteenth or fourteenth century, during the Frankish occupation of Corinth, and that the glassmakers were probably Italians. Even if these were not Byzantine workshops, there are so few finds that we cannot neglect the technical insights they provide.

These workshops were installed in the town, close to the marketplace within a complex of shops and artisans' workshops including pottery workshops and forges. Production was specialized, with one shop making bracelets and little glass objects and another only dishes. The slivers that have been collected reveal that the quality of the glass was excellent, with no impurities. Faulty pieces are few, which goes to show how perfectly skilled the glassmakers were.

Only one furnace has been discovered although normally two were employed; in the first, the materials fused at high temperatures after which the vessels were moved to the second furnace, set at a lower temperature, to cool. So, if this furnace—a square design with sides 2.38 m long—was indeed the only one, it must be presumed to have had three levels; a heating chamber, with a melting chamber above, in which the glass ingredients would have fused at a temperature of 750–780 degrees, separated by a thick partition from the upper level in which the vases would have cooled.²⁶ Byzantine glass is composed of soda, lime, and silica. Colors were added with the help of oxides of iron, copper, and manganese. Pieces of lime and fragments of quartz, as well as copper scale and iron dross, have appeared in the excavations near the furnace. Vases with smooth surfaces, which were blown without the use of molds, have been found on site, but most of the items had been blown first into forms with internal decorations and then, once outside the mold, blown again. Some vases bear stamped, engraved, or even painted decorations, but these are few.

Glass production in Corinth may be defined, according to the fragments of glasses and of whole glasses observed, as the mass production predominantly of drinking cups that were easy to make and, though fragile, of good quality and intended for everyday use, being molded and blown with or without stamped decoration (Fig. 2). Their shapes are plain and repetitive but their colors many. These products, however, have little in common with the exceptional painted pieces and vases with disks, although the Corinthian pieces, with their sober decoration and wide range of colors, do not lack charm.

Nicomedia' in Bithynia, Constantinople and Elsewhere," in Mango and Dagron, *Constantinople and Its Hinterland* (as above, note 1), 317, fig. 5.

²⁵ D. Whitehouse, "Glassmaking at Corinth: A Reassessment," in *Ateliers de verriers: De l'Antiquité à la période pré-industrielle* (Rouen, 1991), 73–82. On Corinth, see G. D. R. Sanders, "Corinth," *EHB* 652–53.

²⁶ This type of furnace is similar to a description of one in a Syriac manuscript dated later than the 9th century. See Davidson, "Glass Factory," 304.

However, some more carefully worked pieces have been found at Corinth, in particular several small cylindrical flasks, which could well have been the subject of this description by Theophilus: "The Greeks make precious drinking cups, which they decorate in gold . . . [with] circles, and within these circles [are] pictures, animals, birds executed in a variety of ways."²⁷ In the case of these objects, the painted decoration was traced onto the surface of a vase that had already been blown; the vase was then placed in a mold in order to undergo a second firing to fix the color. However, it is very unlikely that these were manufactured on the spot. Recently, the most important finds for the history of glassmaking are from the ship that went down at Serçe Limani in Byzantine waters off Rhodes, at the beginning of the eleventh century, and from another shipwreck that went down 30 km further east.²⁸ The fact that cullet used to travel from Syria, a country with a long tradition of glassmaking, to the shores of the Black Sea is evidence of well-established technical and commercial relations between Byzantium and the caliphate.

Broken glass, or cullet, has been recuperated by glassmakers since time immemorial.²⁹ Written sources show that it used to be transported from countries with a long tradition of glassmaking to regions that were sometimes new to glass production: an agreement between Bohemond VII, prince of Antioch, and Venice in 1277 stipulates that the Venetians would have to pay a tax on all cullet exported from Tripoli;³⁰ a notarial act mentions "barrilia plena vitro coloris blavi" that were transported to Majorca in the fourteenth century by a Genoese galley that had come from the East.³¹ It also appears, at least with regard to the West, that the trade in this commodity, which was considered rare, was subjected to strict regulations.³² As mentioned above, our knowledge of Byzantine glassmaking does not yet enable us to answer questions about the diffusion of glass products or even about the distinction between glass manufacturers and glass merchants, although we know that at Corinth, in urban circles, a merchant glassmaker did sell his products from a stall in his workshop without using intermediaries.

Pottery

This is not the place to discuss production in the technical sense, nor to tell the history of the evolution of Byzantine pottery, its shapes and decoration.³³ However, some fea-

²⁷ Theophilus, *Essai*, 79–80, esp. chaps. 13 and 14.

²⁸ On these shipwrecks and the significance of transporting cullet, see F. van Doorninck, Jr., "Byzantine Shipwrecks," *EHB* 902–3.

²⁹ D. Foy, *Le verre médiéval et son artisanat en France méditerranéenne* (Paris, 1989), 39–40.

³⁰ F. van Doorninck, Jr., "The Medieval Shipwreck at Serçe Limani, an Early 11th Century Fatimid-Byzantine Commercial Voyage," *Graeco-Arabica* 4 (1991): 52 n. 46.

³¹ L. Blancard, *Documents inédits sur le commerce de Marseille au Moyen Age*, 2 vols. (Marseille, 1884–85), 1:484.

³² Foy, *Le verre*, 39. D. Jacoby, "Raw Materials for the Glass Industries of Venice and the Terraferma about 1370–about 1460," *JGS* 35 (1993): 65–90.

³³ On manufacturing techniques, see C. Vogt, "Céramique XIe–XIIe siècles," in Durand, *Byzance* (as above, note 10), 382–84; François, *Thasos*, 9–37; C. Vogt and A. Bouquillon, "Technologie des plaques murales décorées de Preslav et de Constantinople," *CahArt* 44 (1996): 105–16.

tures of this pottery, relating both to its manufacture and to some aesthetic and social aspects, are relevant to anyone interested in the conditions of production and the circulation of these objects. The technology of Byzantine pottery did not present particular difficulties and was easily acquired. Since antiquity there had been no interruption in the manufacture of receptacles and especially not in that of clay materials used in building, such as bricks and tiles. There are more and more indications that the technique of lead-based glazes, which was also well known during the Hellenistic period, had never been completely lost.³⁴ Though the quality of the glaze improved and diversified, there do not appear to have been any fundamental technical innovations. This is related to the fact that Byzantine pottery was never considered a luxury product that sought decorative effects, novel shapes, and original decorations to please a refined circle. What we find—and the very conditions in which the finds appear in the course of an excavation only serve to confirm this—shows that Byzantine pottery, even when glazed and decorated, was intended for common use by a very large proportion of the population. Decoration consisted mainly of motifs, in sgraffito or incised, involving the removal of the slip covering, to expose the differently colored clay beneath. The potter's tools were points of varying fineness, made of metal, needles, slivers of wood, bird or fish bones. A particular example is Fine Sgraffito ware, which has a yellow or yellow-green glaze with very elaborate geometrical or animal motifs, incised with a very fine point through a layer of slip (Figs. 3, 4). As with other incised and champlévé methods, this technique was based on the color contrast between the fired clay and the slipped areas.

From this point of view, there was no great difference in status between coarse wares, meaning unglazed pottery intended chiefly for cooking, storage, or transport, and glazed pottery, which corresponded to tableware. Although a distinction may be made—and examples are given below—between the different qualities of tableware, the fact is that none of them may be considered prize ceramics intended for a privileged clientele, with the exception, perhaps, of some types of painted polychrome wares. Unglazed wares were certainly not unskilled products; technological requirements were involved, such as a degree of porosity to keep water fresh and a degree of heterogeneity to render wares resistant to cooking, achieved by adding impurities that were less plastic than clay.³⁵ These wares have long been neglected by archaeologists,³⁶ a setback that has now been largely remedied by a number of field studies and also thanks to a remarkable synthesis by Ch. Bakirtzis.³⁷ In it, he presents the main shapes

³⁴ For the lead-based pottery of antiquity, see D. Pinkwart, "Hellenistisch-römische Bleiglasurkeramik aus Pergamon," in *Pergamon: Gesammelte Aufsätze* (Berlin, 1972), 140–63. For the survival of the technique, see Spieser, "Céramique byzantine médiévale," 250 and nn. 10 and 11.

³⁵ See Spieser, *Die byzantinische Keramik*, chap. 6.4 and pls. 41–46 (note especially the great resemblance between vessel no. 424 (pl. 44) and those called τζαρίκια by Bakirtzis, Βυζαντινὰ προυκαλλόλαγνα, 87–88 and pl. 22, no. 4). See also S. Y. Waksman and J.-M. Spieser, "Byzantine Ceramics Excavated in Pergamon: Archaeological Classification and Characterization of the Local and Imported Productions by PIXE and INAA Elemental Analysis, Mineralogy and Petrography," in *Materials Analysis of Byzantine Pottery*, ed. H. Maguire (Washington, D.C., 1997), 105–34.

³⁶ Spieser, "Céramique byzantine médiévale," 252–53.

³⁷ Bakirtzis, Βυζαντινὰ προυκαλλόλαγνα.

of these wares with their Byzantine names and functions as well as an outline of the chronological evolution of the best recorded examples, especially the amphoras. However, the Byzantine period is also when amphoras gradually changed shape, away from those of antiquity, before finally disappearing. Though the stages of this evolution have not yet been precisely defined, the appearance of the barrel is well documented; barrels and amphoras coexisted for a long time, and shipwrecks carrying cargoes of amphoras are still recorded as late as the thirteenth century.³⁸

The rest of this chapter is concerned with places of production, commercialization, and diffusion, but only of glazed wares, because there is still very little information of this kind about coarse wares.³⁹ With regard to Byzantine pottery as a whole, one would expect to find a very dispersed production, given that it was easy to set up shop producing medium-quality wares that would be distributed over only a small area. The low value of these objects, as well as their unwieldy nature and relative fragility, meant that transporting them long distances could not ensure substantial profits.

This very general hypothesis does, however, need to be modified in several ways. First of all, there is a variety of ware that could, for a brief period around the year 1000, have been considered, if not a luxury product, at least a very high quality one. This painted polychrome ceramic made of white clay was produced not solely to supply tableware but also to provide architectural decorative pieces, icons, and revetments for temples.⁴⁰ It is particularly well attested in Constantinople.⁴¹ In Bulgaria, it appears to have developed in connection with Preslav and its hinterland, and we know that at least part of these wares were manufactured on the spot.⁴² Chemical analyses suggest that part of the white wares found in Constantinople was manufactured in its

³⁸ N. Günsenin, "Récentes découvertes sur l'île de Marmara (Proconèse) à l'époque byzantine: Epave et lieu de chargement," in *Constructions maritimes et fluviales. Approches archéologiques, historiques et ethnologiques* (= *Archaeonautica* 14 [1998]), ed. P. Pomey and E. Rieth (Paris, 1999), 309–16. We thank N. Günsenin for information on this subject and for this reference. For the "disappearance" of amphoras, see Bakirtzis, Βυζαντινὰ πσυκαλολάγγνα, 84–87. On amphoras in the Balkans, see L. Bjelajac, "Byzantine Amphorae in the Serbian Danubian Area in the 11th–12th Centuries," in Déroche and Spieser, *Recherches* (as above, note 1), 109–18. For shipwrecks containing amphoras, see van Doorninck, "Byzantine Shipwrecks," passim.

³⁹ See, however, N. Günsenin's works (cf. "Récentes découvertes," and "Ganos: Résultats des campagnes de 1992 et 1993," *Anatolia Antiqua* 3 [1994]: 165–78). See also Waksman and Spieser, "Byzantine Ceramics," on the problems involved in determining the production center for this type of pottery found at Pergamon.

⁴⁰ Vogt in Durand, *Byzance* (as above, note 10), 388–91, nos. 296–97.

⁴¹ E. Ettinghausen, "Byzantine Tiles from the Basilica in the Topkapu Sarayı and Saint John of Studios," *CahArch* 7 (1954): 79ff. See also, for this kind of pottery in general, V. N. Zaleskaya, "Nouvelles découvertes de céramique peinte byzantine du Xe siècle," *CahArch* 32 (1984): 49–62; Vogt and Bouquillon, "Technologie."

⁴² Cf. E. C. Schwartz, "Medieval Ceramics in Bulgaria," *BSI* 43 (1982): 45–50. For Patleina, see I. Akrabova-Jandova, "Vovo v Patleina sred Jordan Gospodinov," *Preslav* 1 (1968): 78; for Tuzlalak, see T. Totev, "Icones de céramique peinte et en relief nouvellement découvertes à Preslav," in *Actes du XIVe Congrès international des études byzantines. Bucarest, 6–12 septembre 1971* (Bucharest, 1976), 465–68; idem, "Le monastère de Tuzlalak: Un centre de céramique peinte à Preslav aux IXe–Xe siècles" (in Bulgarian), *Archeologia* 18 (1976): 8–15.

hinterland.⁴³ Finally, although its interpretation is not yet definitive, there is the allusion to some *tanstria* of Nikomedeia in a *praktikon* of 1202.⁴⁴ To sum up, this was a very special line of production in the Byzantine world, and, from our vantage point, one that has yet to be understood satisfactorily with regard to its centers of production and diffusion.

Apart from these wares, which were exceptional on account of their decorative qualities, there are a few other facts that prevent us from adhering to the hypothesis outlined above. There is some very secure evidence that points to an important trade in certain categories of ceramics. Shipwrecks have been found containing cargoes of tableware, and some productions have now been identified sufficiently to permit a few details about their diffusion to be gleaned. In the twelfth century, Fine Sgraffito ware was found across the whole territory of the Byzantine Empire as well as in Italy (in Venice and along the Tyrrhenian coastline, always in small quantities) and the Middle East.⁴⁵ Corinth is the only production center for which we have secure evidence (Figs. 3, 4). Measles Ware,⁴⁶ for its part, is dated to the first half of the twelfth century and appears, paradoxically, to have been diffused in Italy, solely along the Adriatic coastline and in Padua, to a greater extent than Fine Sgraffito ware, although of the two, it was poorer in quality.

At the end of the twelfth and the beginning of the thirteenth century, two other Byzantine productions took over. Zeuxippos ware is the Byzantine pottery most frequently found in Italy, but only in the north (Venice, the Tyrrhenian coastline, Parma, Padua, Ferrara, and Bologna). It was also imported into the Crusader states and is represented in Alexandria. It is well identified and technically superior to the average Byzantine production. The decoration and clay are very characteristic, and it is generally concluded that all the vases and sherds that can be placed in this category were the work of a single, as yet unknown, production center (Fig. 5).⁴⁷ However, some aspects of the distribution of these wares present problems, and this hypothesis may well have to be revised. Around the same time as Zeuxippos ware, the production and diffusion of what A. Megaw called Aegean ware was developing (Fig. 6). In spite of its original decorative style, this pottery is technically inferior to Zeuxippos ware.⁴⁸ It was

⁴³ A. H. S. Megaw and R. E. Jones, "Byzantine and Allied Pottery: A Contribution by Chemical Analyses to Problems of Origin and Distribution," *BSA* 78 (1983): 235–65.

⁴⁴ Cf. Zaleskaya, "Nouvelles découvertes"; Spieser, "Céramique byzantine médiévale," 255. See also Mason, "Tiles of Nicomedia," 313–32.

⁴⁵ For Corinth, see Sanders, "Corinth," *EHB*. On the circulation of Byzantine pottery, especially in Italy and the Middle East, see V. François, "Sur la circulation des céramiques byzantines en Méditerranée orientale et occidentale," *La céramique médiévale en Méditerranée* (Aix-en-Provence, 1997), 231–36.

⁴⁶ Pottery with sgraffito decoration enhanced with bright red or brownish red marks: Morgan, *Byzantine Pottery*, 90–95.

⁴⁷ A. H. S. Megaw, "Zeuxippos Ware," *BSA* 63 (1968): 67–68; idem, "Zeuxippos Ware Again," in Déroche and Spieser, *Recherches* (as above, note 1), 259–66. See also, for pottery similar to Zeuxippos ware, Spieser, *Die byzantinische Keramik*, chap. 7.8, pl. 51.

⁴⁸ A. H. S. Megaw, "An Early Thirteenth-Century Aegean Glazed Ware," in *Studies in Memory of David Talbot Rice* (Edinburgh, 1975), 35–45.

originally identified only in Saranda Kolones on Cyprus, though it is now found on many sites in Greece and Asia Minor; in Italy the available information suggests that its diffusion was limited to Venice and the Campagna (Ravello). In the Middle East the distribution of finds is almost the same as that of Zeuxippos ware.

It is still not clear how these types of pottery were diffused; generally speaking, maritime trade played an essential role, as demonstrated by the distribution of sites where they appear. However, on each site, they are found in small quantities alongside local productions or other imports. At Pergamon, for instance, Zeuxippos ware represents scarcely 1% of all the glazed pottery. It does appear to be present in greater quantities in Constantinople and along the shores of the Black Sea, where most of the loveliest finds in this category come from (Fig. 5).

Given our present state of knowledge, shipwrecks and their cargoes still provide the most secure evidence for the volume of commercialization, at least in the case of two of the wares considered above. The wreck found close to the island of Pelagonissos in the northern Sporades is that of a ship containing 1,500 pieces, both entire and fragmentary, of Fine Sgraffito ware, dated to the mid-twelfth century and closely related to Corinthian products.⁴⁹ There is equally good evidence for the commercialization of Corinthian products, which are found widely distributed throughout the empire and even beyond.⁵⁰ As for the commercialization of Aegean ware, the evidence comes from the Castellorizo wreck, which went down off the Lycian coast, on the merchant sea route that linked Cyprus and Rhodes with the Aegean.⁵¹

Though these wares are particularly well identified, and their diffusion relatively well observed, they are not the only ones. Among the others is a very fine ceramic, with practically no visible temper and covered with a very characteristic green glaze with purple marks (analysis has confirmed that manganese was used).⁵² It is known through finds at Sardis and Pergamon, although its production cannot be attributed to either center.⁵³ On the other hand, a production very characteristic of Sgraffito ware, covered with bottle-green marks and dribbles, was put out at Lemnos in the

⁴⁹ C. Kritzas, "Byzantine Wreck at Pelagos' Island," *Ἀρχαιολογικὰ Ἀνάλεκτα ἐξ Ἀθηνῶν* 4.2 (1971): 176–85; E. Ionnidaki-Dostoglou, "Les vases de l'épave byzantine de Pélagonnèse-Halonnèse," in Déroche and Spieser, *Recherches* (as above, note 1), 157–71. Cf. van Doorninck, Jr., "Byzantine Shipwrecks," *EHB*.

⁵⁰ François, "Sur la circulation."

⁵¹ M. Michailidou and G. Philotheou, "Plats byzantins provenant d'une épave près de Castellorizo," in Déroche and Spieser, *Recherches* (as above, note 1), 173–76; I. Loucas, "Les plats à glaçure inédits d'une collection privée de Bruxelles," in *ibid.*, 177–83.

⁵² S. Y. Waksman, "Les céramiques byzantines des fouilles de Pergame: Caractérisation des productions locales et importées par l'analyse élémentaire (PIXE et INAA)" (thèse, Université Louis-Pasteur, Strasbourg, 1995); Spieser, *Die byzantinische Keramik*, chap. 7.9 and cat. no. 352, pp. 552–55; Waksman and Spieser, "Byzantine Ceramics." For Pergamon, cf. K. Rheidt, "The Urban Economy of Pergamon," *EHB* 627–28.

⁵³ J. A. Scott and D. Kamilli, "Late Byzantine Glazed Pottery from Sardis," in *Actes du XV^e Congrès international des études byzantines, Athènes, 1976* (Athens, 1981), 2:679–96.

fifteenth century. It was diffused solely in the territories under the rule of the lords of the producer island: Thasos, Samothrace, and Ainos.⁵⁴

The production of two other centers has been identified; distribution was primarily and probably solely regional, even local. At Pergamon, local pottery production has been detected, thanks to wasters and other evidence of manufacture (the presence of stils). Analysis has confirmed the unity of this ware.⁵⁵ Going by the external appearance of the sherds (they have not been analyzed), Pergamon ware could have been used on the Gülpınar site, about 200 km further north.⁵⁶ The production identified at Serres was undoubtedly comparable, in terms of distribution and influence, to that of Pergamon.⁵⁷

These situations were further complicated by the problem of imitations. At Pergamon, some sherds are glazed in a manner similar to that described above, with a decoration of purple marks, though they belong to locally made vases, as demonstrated by analysis of their constituent clay.⁵⁸ There is evidence that some workshops were not limited to one type of production: at Pergamon again, sherds have been found that were made (though not there) of homogeneous clay, some decorated with fine sgraffito and others with slip.⁵⁹

Other clues about production centers are obviously provided by the workshops that are distributed over the territories of the empire or under former Byzantine rule, and can be detected by the remains of kilns or of dumps connected to kilns. Among these are the following, grouped by regions.

Italy: at Classe near Ravenna, one kiln active between the fifth and eighth centuries; coarse and glazed wares have been found nearby.⁶⁰

Former Yugoslavia: wasters have been discovered at Skopje for the eleventh and twelfth centuries⁶¹ and at Novo Brdo for the fourteenth and first half of the fifteenth centuries.⁶²

Greece: at Kounoupi (Argolis), two kilns used for firing coarse ware and amphoras, dated to the end of the sixth and the beginning of the seventh century;⁶³ on

⁵⁴ François, *Thasos*, 144–45.

⁵⁵ Spieser, *Die byzantinische Keramik*, chap. 2; Waksman and Spieser, "Byzantine Ceramics."

⁵⁶ Spieser, "Céramique byzantine médiévale," 258–59, F. Yenişehirlioğlu, "La céramique glaçurée de Gülpınar," in Déroche and Spieser, *Recherches* (as above, note 1), 303–15.

⁵⁷ D. Papanikola-Bakirtzi et al., *Ceramic Art from Byzantine Serres* (Urbana, Ill., 1992).

⁵⁸ Spieser, *Die byzantinische Keramik*, chap. 7.9, and cat. nos. 559–61 and 578.

⁵⁹ Ibid., chap. 7.10, and cat. nos. 571–73.

⁶⁰ M. G. Maioli, "Produzione di ceramiche tardoantiche e bizantine: Una fornace recentemente scoperta a Classe (Ravenna)," *Faenza* 66 (1980): 217–27.

⁶¹ B. Babić, "Trouvaille scellée de poterie de table byzantine à Skopsko Kale," *ArchIug* 12 (1971): 45–53.

⁶² M. Corović-Ljubinković, "La céramique serbe émaillée du Moyen-Age: La céramique de Novo Brdo," *Travaux du Musée National* 3 (1962): 182–86.

⁶³ W. Rudolf, "Excavations at Porto Cheli and Vicinity: The Early Byzantine Remains," *Hesperia* 48 (1979): 295–311.

the ancient Roman agora at Corinth, four kilns dating from the eleventh to the twelfth century;⁶⁴ on Euboea, at Oreoi, a kiln dated to the eleventh and twelfth centuries;⁶⁵ in the Nemea valley, traces of a kiln and kiln tools (ox-yokes) from the mid-Byzantine period;⁶⁶ at Trikala (Thessaly), a kiln containing some vases awaiting their second firing, thirteenth century.⁶⁷ Elsewhere, other centers of production of varying importance have been identified by means of dumps and stilts: Valtesi in Phokis,⁶⁸ Serres in the second half of the thirteenth century; Thessalonike in the fourteenth⁶⁹ and Lemnos in the fifteenth century.⁷⁰

Cyprus: Dhiorios' kiln was active in the seventh to eighth centuries and used for common ware; at Lemba (Paphos district), wasters are evidence of production at the beginning of the thirteenth to mid-fourteenth centuries, similarly at Enkomi (Famagusta district), for the thirteenth or fourteenth century;⁷¹ at Paphos, a workshop was established in the ruins of the castle of Saranda Kolones during the thirteenth century and continued to operate until the fourteenth century;⁷² at Lapithos (Kyrenia district), part of a kiln has been found, containing vases arranged for firing separated by stilts (15th–16th centuries) (Fig. 7).⁷³

Rumania: many kilns have been discovered, including in the Ploiesti region, close to the village of Bucov, kilns from the eighth to tenth centuries in which earthenware and glazed ware were fired;⁷⁴ at Pacuiul-lui-Soare, a kiln from the mid-eleventh century⁷⁵ and production in the thirteenth and early fourteenth centuries evidenced by wasters;⁷⁶ at Suceava, Curtea de Arges, and Facai Craiova, a few kilns dated to the fourteenth and fifteenth centuries⁷⁷ and two undated kilns at Capidava and Dinogetia.⁷⁸

⁶⁴ Morgan, *Byzantine Pottery*, 7–21.

⁶⁵ A. Sampson, "Ορεοί (Εύβοια)," *ΑΔ* 29.2 (1973–74): 487.

⁶⁶ F. Sutton, "Appendix: Ceramics of the Historic Period," in J. C. Wright et al., "The Nemea Valley Archaeological Project: A Preliminary Report," *Hesperia* 59 (1990): 655.

⁶⁷ D. Theocharès, "Ασκληπιείον Τρίκης (Τρίκαλα)," *ΑΔ* 20.2 (1965): 1: 313–16.

⁶⁸ A. Armstrong, "Some Byzantine and Later Settlements in Eastern Phokis," *BSA* 84 (1989): 47.

⁶⁹ D. Papanikola-Bakirtzi, "Εργαστήριο έφυσωμένης κεραμεικής στη Θεσσαλονίκη: Πρώτες παρατηρήσεις," in 'Αφιέρωμα στη μνήμη Στυλιανού Πελεκανίδη (Thessalonike, 1983), 377–88. A. Vavyloupoulou-Charitonidou, "Céramiques d'offrande trouvées dans des tombes byzantines tardives de l'hippodrome de Thessalonique," in Déroche and Spieser, *Recherches* (as above, note 1), 209–25.

⁷⁰ François, *Thasos*, 86.

⁷¹ D. Papanikola-Bakirtzi, "Cypriot Medieval Glazed Pottery: Answers and Questions," in *The Sweet Land of Cyprus*, ed. A. A. M. Bryer and G. S. Georghallides (Nicosia, 1993), 116–19 and 120–21.

⁷² A. H. S. Megaw, in *RDAC* (1976): 117–46.

⁷³ Papanikola-Bakirtzi, "Cypriot Glazed Pottery," 119–20.

⁷⁴ M. Comsa, "La céramique de type byzantin de Bucov-Ploiesti," in *Actes du XIV^e Congrès international des études byzantines*, Bucarest (as above, note 42), 295–98.

⁷⁵ S. Baraschi, "Un cuptor de ars oale de Pacuiul-lui-Soare (secocul al XI lea)," *Studi si cercetari istorie veche* 25.3 (1974): 461–72.

⁷⁶ S. Baraschi, "Ceramica din asezarea medievala (secole XIII–XIV)," *Pacuiul-lui-Soare* 2 (1977): 67–115.

⁷⁷ S. Baraschi, "Sur la production céramique de tradition byzantine au Bas-Danube," *Etudes byzantines et post-byzantines* 1 (1979): 29–39.

⁷⁸ Baraschi, "Un cuptor," 461–72.

Bulgaria: two kilns and traces of workshop sites have been found in Patleina. Architectural ceramics and dishes were being produced there in the ninth to tenth centuries; more recent excavations have exposed nine shops and as many kilns;⁷⁹ at Preslav, a large manufacturing center was set up near the monastery and operated during the ninth and tenth centuries; pots, architectural ceramics, and terra-cotta icons were manufactured there. At least ten kilns have been spotted on the banks of two rivers, Tica and Vinica; the large kilns were used to fire vases and the little ones bricks and tiles, in the ninth and tenth centuries.⁸⁰ Kilns, wasters, and tools point to pottery work in the great urban center of Tsarevets in the thirteenth and fourteenth centuries;⁸¹ finally, Varna also emerges as a center of production.⁸²

Turkey: in the imperial agora at Iasos, two kilns have been discovered, dated to the ninth and tenth centuries;⁸³ stilts and misshapen vases are evidence of production at Eski Anamur (the Anemourion of antiquity) in the eleventh to thirteenth centuries;⁸⁴ at Pergamon in the thirteenth century; at Iznik (Nicaea) in the tenth to the beginning of the fourteenth century.⁸⁵

A significant number of shops were set up close to rivers or the coast, reflecting the potters' need for water as well as confirming the importance, not only of sea transport, as mentioned above, but also of river transport. Together, the finds seem to indicate that the number of workshops increased in the thirteenth century, and production may well have gone up too. That it became more widespread is confirmed by the few Byzantine texts that mention potters and allude to a rural craft performed by both specialized potters and potter-farmers—small family businesses that supplied the village community. This, at least, is the information gleaned from documents relating to eastern Macedonia, which mention several potteries operating in the same village.⁸⁶

⁷⁹ Akrabova-Jandova, "Vovo v Patleina," 69–79.

⁸⁰ T. Totev, "L'atelier de céramique peinte au monastère royal de Preslav," *CahArch* 35 (1987): 65–80; idem, "Fours à céramique dans le lac de retenue des eaux du barrage Vinica près de Preslav," *Arheologija Bulgarska* 15.4 (1973): 58–68. For other examples of brick and tile production linked to monasteries, this time in Serbia, see S. Popović, *Krst u krugu: Arhitektura manastira u srednjovekovnoj Srbiji* (Belgrade, 1994), 325–37 (and 287–88 for pottery production in Serbian monasteries); see also M. Ristić, S. Čircović, and V. Korać, *Opeke srpskih srednjovekovnih manastira* (Belgrade, 1989). We thank S. Popović for these references.

⁸¹ M. Dolmova, "Kam vaprosa za proizvodstvo na sgrafito keramika v Tarnovgrad," *Arheologija* 27.2 (1985): 10–20. On 13th- and 14th-century workshops in general, see K. Kuleff et al. in *International Symposium on Archaeometry*, ed. Y. Maniatis (Amsterdam, 1989), 533–42.

⁸² D. Dimitrov, "Rabotilnitsa za trapezna keramika vŭv Varna," *Izvestiia na varnenskoto arheologichesko druzhestvo* 11 (1960): 111–17.

⁸³ C. Laviosa, "Iasos 1972," *AnatSt* 23 (1973): 41–43.

⁸⁴ T. Tömöry, "Medieval Sgraffito Ware from Anemorium in Cilicia," *Belleten* 41 (1977): 30–40.

⁸⁵ V. François, "Les ateliers de céramique byzantine de Nicée/Iznik et leur production (Xe–début XVe siècle)," *BCH* 121 (1997): 411–42.

⁸⁶ J. Lefort, "Anthroponymie et société villageoise (Xe–XIVe siècle)," in *Hommes et richesses dans l'Empire byzantin* (as above, note 1), 2:236–37 (especially the reference in 1316 to seven potters at Radolibus). Cf. J. Lefort, "The Rural Economy, Seventh–Twelfth Centuries," *EHB* 308–9.

The information also corresponds to the greater quantity of later sherds found in excavations, particularly in western Asia Minor.

That this increase cannot simply be ascribed to the greater quantity of archaeological finds is demonstrated by the contemporaneous increased usage of stilts, which first appeared in Byzantine pottery at the end of the twelfth century. These are little tripods with sharp points that were shaped by hand in coarse clay or molded. Stilts were set between vases, with the flat part against the unglazed base of one piece and the three points touching the inner glaze-covered sides of the next one, which explains the marks left by these three points of contact at the bottom of vases. Vases have been discovered in this position in the Lapithos kiln (Cyprus) (Fig. 7).⁸⁷ The technique did not originate in Byzantium: evidence for its use is found much further back in the Far East, since Chinese products already bore these marks at the dawn of the Christian era. Subsequently, the tripod was introduced to the Near East by Muslim merchants; ninth-century Persian and Egyptian pots show traces of its use. When Byzantine potters adopted this tool, it enabled them to fill up their kilns and made the vases easier to unload, but it did not change the volume of production. This sort of tool is particularly precious because it helps to date the pottery and its presence alone is evidence for the existence of a workshop, even when nothing else remains.

Three trends that emerged during the twelfth century to develop fully around 1200 may thus be linked: the well-known increase in the circulation of people between the western and eastern basins of the Mediterranean; a general increase in production observable over the whole of the Mediterranean world, not only within the Byzantine Empire; and an overall increase in the commercialization and distribution of a proportion of these productions. One consequence is the existence in Italy and the Middle East of composite sets consisting of Byzantine wares, other "Christian" products, and Islamic pottery from both east and west. But these composite sets do not appear on Byzantine territory: Byzantium does not appear to have imported any pottery. Thus, as well as indicating a possible change in customary eating practices (such as a greater use of pottery vessels instead of wooden ones) and a very probable demographic surge within the Byzantine Empire, the evolution of the production and commercialization of pottery also serves to pinpoint Byzantium's links with the rest of the Mediterranean world, which were closer than in previous centuries.

Thus we know about some workshops and are able to identify Byzantine wares, and sometimes also note their distribution. However, we still know nothing about the people involved in this process. When relatively important shops were involved, what was the potter's role in the trade? Did he sell his products himself, or did he entrust them to merchants, who undertook to sell them in possibly distant markets and, if so, under what conditions? Were these merchants Byzantines or, as in more recent periods, Latins? There are as yet no answers to any of these questions. Several solutions may nevertheless be suggested by studying practices in neighboring lands.

⁸⁷ Papanikola-Bakirtzi, "Cypriot Glazed Pottery," pl. 3, a.

For instance, the documentation for the sale of pottery made in Valencia (Spain) and its hinterland in the fourteenth and fifteenth centuries is exceptionally rich. Contracts drawn up before a notary tell us about the professional merchants who bought part or all of a potter's production and ensured its distribution by selling it in markets, which could sometimes be far from the production center, as in the case of Narbonne or Majorca. These merchants would also preempt vases that had yet to be made—and a client might even supply some of the primary materials (lead and tin) that were required to complete his order, as stipulated in a document dated 26 March 1325⁸⁸—or he might pay the potter a deposit. The client could also be a company of merchants and bankers.⁸⁹ Buyers frequently appear in connection with the textile industry—in the West at any rate. Cloth merchants and tailors made contracts with potters; for instance, the merchants of Narbonne who traveled to Valencia to sell their textiles went home, once their business was concluded, loaded with consignments of Manises dishes. A note of purchase by a tailor of a potter's entire production for a year shows that this man was engaged in two lines of trade: tailoring and selling pottery. This entry is evidence of the way trade routes in the textile industry were used to sell the pottery products of the region, rather than simply showing that the traders were keen to avoid returning home with empty holds.⁹⁰

In the case of Byzantium, little is known about the traffic in pottery products, and the details of this trade remain obscure. Very few, if indeed any, written documents appear to have survived from any period. Among all the corporations listed in the *Book of the Eparch*, there is nothing about potters; details about the way markets were organized and artisans installed contain no reference to traders in pottery. This silence extends to the documents relating to commercial transactions, notarial acts, and household inventories, although we know that such documents exist in the case of pottery production in neighboring lands, which could sometimes be very close to the Byzantine world in terms of either geography or quality and appearance. For instance, in the thirteenth century, the *droitures* of the Acre Fonde include pottery among the list of products traded locally: it was subject to taxation, more heavily in the case of exports (25% of the value) and less so for imports (8.3%). In Beirut, on the other hand, the privileges granted to the Genoese in 1223 included an exemption from commercial franchise for the *labours de poterie*.⁹¹ Al-Makhzumi's *Minhadj*, a fiscal treatise from the

⁸⁸ P. Lopez Elum, "Origen y evolucion de dos grandes centros ceramicos: Manises y Paterna," in *La ceramica medievale nel Mediterraneo occidentale, Siena 8–12 ottobre 1984, Faenza 13 ottobre 1984* (Florence, 1986), 167.

⁸⁹ See the order for 256 vases, placed with the potter Asmet Zuleima of Manises in December 1401, by the Datini merchant company, which was active in Valencia from the end of the 14th century, on behalf of another large Italian commercial company, the Florentine company of Zanobi Gaddi and Antonio di ser Bartolomeo: M. Spallanzani, "Un invio di Maioliche ispano-moresche a Venezia negli anni 1401–1402," *Archeologia medievale* 5 (1978): 529–41.

⁹⁰ Lopez Elum, "Origen," 167.

⁹¹ J. Richard, "Colonies marchandes privilégiées et marché seigneurial: La fonde d'Acre et ses *droitures*," *Le Moyen Age* 60 (1953): 330–31.

Fatimid-Ayyubid period, mentions imports of pottery to Tinnis.⁹² The Cairo *Geniza* documents are full of information about prices. Humble marriage contracts in particular stipulate the prices of certain household items, including pottery—vases, jars, plates, large bowls—which formed part of the dowry.⁹³ The *Geniza* documents also provide valuable information about different kinds of potters and their different methods, which are evidence of specialized production.⁹⁴ Finally, a charter drawn up in March 1168 between William II, king of Sicily, and a Benedictine abbey lists the items sent from Messina to a monastery in Jerusalem and mentions fifty *scutellas* that were exempt from taxation.⁹⁵

Despite these lacunae in Byzantine documents, archaeological discoveries have shown that the exchange and circulation of pottery products was in fact very complex. Three levels can be distinguished with certainty. First, there were regular and quantitatively important exchanges that constituted a real market and probably followed trade routes used by other sorts of merchandise. The evidence for this is found in shipwrecks. This level involves only quality pottery that was to some extent standardized. Second, there were regular exchanges on a regional scale, with one center supplying a region's pottery requirements (though it is still not possible to give a precise definition of "region"). Finally, there was a medley of intermediary, secondary, marginal, and intermittent currents that ensured the circulation of medium or small quantities of vases. It is in this context that the presence of small numbers of vases far from their centers of production may be explained by looking at customs on board ship. For instance, in the Mediterranean, unless the captain had contracted to feed his passengers, they, whether pilgrim, merchant, or Crusader, would each have to buy all sorts of supplies and comforts prior to embarkation. These objects then belonged to the passenger in question, who would renew his supplies at every port of call. Accounts of such journeys provide valuable information about these purchases; Brother Niccolo da Poggibonsi, who traveled from Venice to the Holy Land in 1346, wrote that "tutti gli storigli si rompano" during a storm, which implies that all his containers were indeed made of clay;⁹⁶ two other Italians en route to the Holy Land wrote in their account of their travels that, prior to embarking at Venice on 4 September 1384, they bought a mattress, a good bottle of malmsey, a little chest in which to store the Bible and Gospels, some silver cups, and some plates;⁹⁷ and Giovanni Livi, in his book *Dall'archivio di*

⁹² C. Cahen, "Douanes et commerce dans les ports méditerranéens de l'Egypte médiévale d'après le *Minhadj* d'Al-Makhzumi," *Journal of the Economic and Social History of the Orient* 7 (1964): 227.

⁹³ E. Ashtor, "Matériaux pour l'histoire des prix dans l'Egypte médiévale," *Journal of the Economic and Social History of the Orient* 6 (1963): 177–79.

⁹⁴ S. D. Goitein, "The Main Industries of the Mediterranean Area as Reflected in the Records of the Cairo *Geniza*," *Journal of the Economic and Social History of the Orient* 4 (1961): 188–89.

⁹⁵ D. Pringle, "Pottery as Evidence for Trade in the Crusader States," in *I comuni italiani nel regno crociato di Gerusalemme*, ed. G. Airaldi and B. Z. Kedar (Genoa, 1986), 470.

⁹⁶ *Viaggio da Venezia a Gerusalemme di Fr. Niccolo da Poggibonsi*, ed. F. Zambrini (Bologna, 1872).

⁹⁷ *Viaggio in Terra Santa, da Frescobaldi Lionello, 1384–1405*, ed. C. Angelini (Florence, 1944).

Francesco Datini mercante pratese (1335–1410), lists “richardo di tutte quelle chose che si fanno bisogno per il mare: una cassa mezzana di legno, tre orciuoli grandi, sei scodelle, due catinelle, due pentole invetrate, due tazze di stagno, dodici bicchieri di vestro, sei taglieri.” Thus the purchase of pottery vessels in the port of departure may well have contributed to the circulation of pottery products without involving any maritime trade as such.

Byzantine Weights

Christopher Entwistle

Metrology

The metrological system employed throughout most of the Byzantine period was a duodecimal one. The linchpin of this system was the Byzantine pound or *litra*, derived from the late Roman pound. The *litra* was divided into 12 ounces, the ounce into multiples of the *scripulum*, the smallest unit of the libral system. The *litra* was also divisible into 72 solidi: the solidus, later known as the nomisma, was the standard gold coin introduced by Constantine the Great in 309, which was to retain its weight and fineness well into the tenth century. Imperial legislation of the fourth century records that 72 solidi were struck to the pound. The theoretical weight of the solidus is generally taken by numismatists to be 4.55 g, thus giving a theoretical weight for the late Roman/early Byzantine pound of 327.60 g. These figures should be treated with caution. Not only is it clear that the weight of the solidus, and hence the pound, fluctuated, but it is also extremely unlikely that an administrative system of sufficient complexity existed to impose a standard weight system throughout the vast expanse of the late Roman Empire. In a recent study of Byzantine metrology, based on the weights of surviving coins, the following figures for the pound during the late Roman and Byzantine eras are proposed: about 324 g from the fourth to the sixth century, 322 g in the sixth and seventh centuries, 320 g from the seventh to the ninth century, 319 g between the ninth and the beginning of the thirteenth century, and subsequently declining below 319 g.¹ On the evidence of surviving weights, at least for the fourth to the seventh centuries, these figures should also be treated with skepticism.²

¹ E. Schilbach, *Byzantinische Metrologie* (Munich, 1970), 166–68. On weights, cf. S. Bendall, *Byzantine Weights: An Introduction* (London, 1996).

² The British Museum possesses thirteen 1 pound weights dating from between the 3d and 7th centuries. These weigh, respectively, 323.76 g, 323.71 g, 322.53 g, 322.10 g, 321.80 g, 321.71 g, 319.90 g, 318.11 g, 315.92 g, 311.20 g, 309.14 g, 301.15 g, and 300.63 g. In some instances, these weights have lost their inlays or are damaged in other respects. Most, however, are in an excellent state of preservation, and their deviation from a theoretical weight for the late Roman pound of between 324 g and 327 g cannot be explained by their condition alone. The metrological evidence supplied by these and other pound weights strongly suggests the existence of local weight standards.

Administration

The administration of weights and measures devolved to a number of officials. Chapter 15 of Novel 128 of Justinian states that the praetorian prefect and the eparch of the city were responsible for commodity weights and the *comes sacrorum largitionum* for coinage weights of gold, silver, or bronze. It has recently been argued that the importance of the latter official declined considerably during the sixth century and his responsibilities were subsumed by the eparch of Constantinople.³ This official was certainly responsible for the issuance of glass weights during the sixth and seventh centuries, and, by the ninth century, according to the *Book of the Eparch*, his control of all forms of weights and measures in the capital was absolute.⁴ In reality, as the inscriptions on surviving weights indicate, other officials not mentioned in imperial legislation also issued weights. In the western half of the empire these included various proconsuls, *viri laudabiles* and *viri clarissimi*; in the East the titles *anthypatos*, *comes*, and *ephoros* have been recorded.

Typology and Chronology

Three materials were commonly employed in the manufacture of Byzantine commodity and coinage weights: bronze, glass, and lead. In very rare instances, gold and silver were also used (Fig. 1). Copper-alloy weights take three main forms: a flattened sphere doubly truncated, a square, or a disk; occasionally octagonal or polygonal examples have survived. The very limited archaeological and epigraphical evidence suggests the following tenuous typological chronology. From the beginning of the third to the end of the fifth century, weights in the form of a truncated sphere were the dominant type (Fig. 2). These were derived from earlier Roman lead and stone examples, and nearly all bear the *omicron/upsilon* (Ϟ) abbreviation for the ounce. Although the use of the *gamma/omicron* (Ϛ) as an uncial abbreviation is known as early as the first century, it does not become the standard abbreviation until its appearance on square weights during the course of the fourth century. The square type appears to have been the dominant form until the latter half of the sixth century, when the discoid type gradually superseded it. Finds from such sites as Yassı Ada, Beth Shean, Mafraq, and San Vincenzo al Volturno, suggest that the discoid type was predominant from the seventh to the early ninth century (Fig. 3).⁵ If the suggested chronology at Corinth is correct—

That these existed in the Roman period at least is proved by weights with inscriptions explicitly stating that they belonged to a local system. A. Kushnir-Stein, "Two Inscribed Weights from Banias," *IEJ* 45.1 (1995): 48–51.

³ D. Feissel, "Le préfet de Constantinople, les poids-étalons et l'estampillage de l'argenterie au VIe et au VIIe siècle," *RN* 28 (1986): 119–42.

⁴ J. Nicole, ed., *The Book of the Eparch* (London, 1970), 32, 45, 47, 48, and 56.

⁵ For Yassı Ada, see G. F. Bass and F. H. van Doorninck, Jr., *Yassı Ada*, vol. 1, *A Seventh-Century Byzantine Shipwreck* (College Station, Texas, 1982), 203, fig. 10-2; the weights from Beth Shean in



1. 1 ounce silver-gilt weight with the Mother of God. Blachernitissa, Constantinople, between 11 January 1055 and 31 August 1056. British Museum, Medieval and Later Antiquities 1992, 5-1, 1



2. 3 ounce copper-alloy spheroidal weight, ca. 200-400. British Museum, Medieval and Later Antiquities 1853, 2-25, 1



3. 3 ounce copper-alloy discoid weight. Eastern Mediterranean, 7th-9th century. British Museum, Medieval and Later Antiquities 1982, 5-6, 20



4. 6 ounce copper-alloy weight. Eastern Mediterranean, 5th-6th century. British Museum, Medieval and Later Antiquities 1938, 10-4, 4



5. 2 ounce copper-alloy weight. Eastern Mediterranean, 5th–6th century. British Museum, Medieval and Later Antiquities 1938, 10–4, 14



6. 6 ounce copper-alloy weight. Eastern Mediterranean, 4th–6th century. British Museum, Medieval and Later Antiquities 1921, 6–17, 1



7. 3 ounce copper-alloy weight. Eastern Mediterranean, 5th–6th century. British Museum, Medieval and Later Antiquities 1985, 10–15, 2



8. Four silver inlaid copper-alloy weights with imperial figures. Probably Constantinople, late 4th–5th century. British Museum, Medieval and Later Antiquities 1863, 12–28, 1; 1980, 6–1, 2, 3 and 5



9. Copper-alloy exagium solidi with three imperial figures. Western Roman Empire, late 4th century A.D. British Museum, CM 48, 8–19, 157



10. Glass coin weight with box monogram: "of Pelagios." Eastern Mediterranean, 6th century A.D. British Museum, Medieval and Later Antiquities 1980, 6–11, 11



11. Glass coin weight with cruciform monogram: "of Akakios." Eastern Mediterranean, ca. 550–650. British Museum, Medieval and Later Antiquities 1991, 5–12, 13

this is the only site to have produced quantities of commodity weights dating from the middle Byzantine period—then discoid weights were still being produced as late as the twelfth century.⁶

Of the few thousand Byzantine weights that have survived, most fall into the category of “miscellaneous”: that is, they are simply marked with their relevant denomination and perhaps a subsidiary decorative motif such as a cross. It is possible, however, to isolate and roughly date certain iconographic types. The most common in the early Byzantine period is the “cross within wreath” type. This takes two forms: a wreath enclosing a prominent Latin cross flanked by the denominational mark (Fig. 4), or a wreath enclosing a cross above the denominational mark (Fig. 5). These two designs are commonly found on square weights dating from the fifth and sixth centuries. Other distinctive types include weights with architectural decoration—either a single arch enclosing a cross and the denomination (Fig. 6), or a facade composed of two triangular arches and one rounded arch enclosing the same (Fig. 7)—or “imperial” weights, that is, weights decorated with one or more imperial figures. The standard format for this type depicts two imperial busts, nimbed, diademed, and wearing paludamenta fastened by stylized fibulae on the right shoulder, within a wreath. More elaborate examples show standing emperors with shields, spears, or bows engaged in abbreviated hunting scenes or juxtaposed with other figures such as *tyches* or Victories (Fig. 8). Such weights, more than any other, are clearly vehicles of imperial propaganda and were mainly issued in the late fourth and early fifth centuries at a time when the empire was split for administrative purposes. The only other series of weights exclusively decorated with imperial figures are *exagia solidi* (Fig. 9). These were issued specifically as coin weights, seemingly to check the weights of the *solidus* and *semissis*. Introduced by Julian, most are to be dated to the late fourth or the early fifth century, although examples dating from the reigns of Marcian and Leo are known.

Glass as a material for weights had distinct advantages. Unlike lead or bronze, it was not prone to oxidation or corrosion, and attempts to alter its weight were more readily detectable. The method of manufacturing glass weights—some, if not all, were produced by pouring a blob of glass onto an iron plate and then stamping it with an iron die—had an additional advantage: those weights significantly above or below the relevant mean could be remelted and reused.

A recent statistical analysis of more than five hundred glass weights shows that the majority of them were used to weigh the *solidus/nomisma* (theoretical weight 4.55 g) and its divisions, the *semissis* (theoretical weight 2.27 g) and *tremissis* (theoretical

Israel are as yet unpublished; for Mafrag, see J.-P. Humbert, *El-Fedein: Mafrag, Jordanie: Rapport préliminaire de la campagne de fouilles 1986* (Jerusalem, 1986), 20, pl. 7; the weight from San Vincenzo was a 2 ounce discoid example (Small find no. 1393) found in an early 9th-century context in a workshop at the southern end of the site (J. Mitchell, personal communication, 15 November 1993).

⁶ G. R. Davidson, *The Minor Objects*, Corinth 12 (Princeton, N.J., 1952), nos. 1595, 1602, 1605, and 1606, pp. 209–10, pls. 94–95.

weight 1.55 g).⁷ A very rare group of glass weights stamped with denominational marks illustrate that they were made to weigh not only lightweight solidi and multiples of the solidus, but also multiples and divisions of the ounce.

More than twenty different iconographic types of glass weights have been identified. These can be conveniently compressed into the following eight categories: weights stamped with a box monogram; with a cruciform monogram; with a central monogram enclosed by an inscription; with one or more imperial busts sometimes juxtaposed with a monogram or a bust of an eparch or Christ; with a bust of an eparch with identifying inscription; with a bust of an eparch without inscription; with a denominational mark; and finally, weights with debased monograms or busts, sometimes referred to as “Arabo-Byzantine.”⁸ Of these categories, the most typical are those simply stamped with a box (Fig. 10) or cruciform monogram (Fig. 11). So many different types have survived that it suggests that if the rough chronology for glass weights is correct—most are dated to the sixth and the first half of the seventh century—then the monograms must refer not only to the eparchs of Constantinople but to the eparchs of the major cities of the empire. The eventual disappearance of glass weights during the course of the seventh century can probably be ascribed to both the contraction of the economy during this period and the disruption of the administrative apparatus involved in their manufacture and distribution following the loss of such key provinces as Syria and Egypt to the Persians and Arabs.

⁷ I. Freestone and M. Leese, “Byzantine Glass Weights: Composition, Manufacture and Weight Standards,” in C. J. S. Entwistle, *A Catalogue of the Late Roman and Byzantine Weights and Measures in the British Museum* (forthcoming).

⁸ The bibliography on glass weights is extensive. Most iconographic types are illustrated in the following: U. Monneret de Villard, “Exagia bizantini in vetro,” *RIN* 35 (1922): 93–107; M. Jungfleisch, “Les dénéraux et estampilles byzantins en verre de la Collection Froehner,” *Bulletin de l'Institut d'Égypte* 14 (1932): 233–56; P. Balog, “Poids monétaires en verre byzantino-arabes,” *RBN* 104 (1958): 127–37.

Sardis

Clive Foss and Jane Ayer Scott

The history of Sardis is marked by a profound break. Before 616, it was the capital of a rich province, a large metropolis of a typical Roman and late antique type, adorned with imposing public buildings, providing extensive services for its large population, and a center of varied economic activities. Its destruction in the early seventh century is characterized by violent burning, extensively attested in the archaeological record, and a cessation of coin finds after 616, the result of a Persian attack.¹ The city was never rebuilt, and it declined to consist of a powerful hilltop fortification, with small settlements scattered over the ancient site, all built of or upon the ruins of the earlier city. Its economic role in the Byzantine period is poorly attested but was fundamentally different from what it had been before the seventh century.

In the time of Justinian, Sardis was the capital of the highly developed province of Lydia, which contained more than twenty cities and extensive agricultural and mineral resources.² The city was the center of a network of Roman roads that connected it with the Aegean and all parts of Asia Minor. Sardis was entered via a marble-paved east-west road lined with colonnades and shops, the “Byzantine Shops,”³ along the south wall of a grand bath and gymnasium complex, within which functioned the largest known synagogue in the diaspora.⁴ The road, the shops, and the major public buildings that have been excavated were maintained and in use in the early seventh century.⁵

¹ For the destruction, see C. Foss, *Byzantine and Turkish Sardis* (Cambridge, Mass., 1976), 53f; idem, “The Fall of Sardis in 616 and the Value of Evidence,” *JÖB* 24 (1975): 11–22; cf. N. Oikonomides and F. Drosoyianni, “A Hoard of Gold Byzantine Coins from Samos,” *RN* 31 (1989): 145–82.

² For an overview, see Foss, *Byzantine and Turkish Sardis*, 19–52; G. M. A. Hanfmann, *Sardis from Prehistoric to Roman Times* (Cambridge, Mass., 1983), 1–16, 139–214; J. A. Scott, “Sardis in the Byzantine and Turkish Eras,” in *Sardis: Twenty-Seven Years of Discovery*, ed. E. Guralnick (Chicago, 1987), passim.

³ The shops on the north side are published in detail in J. S. Crawford, *The Byzantine Shops at Sardis* (Cambridge, Mass., 1990).

⁴ For the synagogue, see A. Seager and A. T. Kraabel in Hanfmann, *Prehistoric to Roman*, 168–90. For the economic and social status of the Jewish community, see J. H. Kroll, *The Greek Inscriptions of the Sardis Synagogue* = *Harvard Theological Review* 94.1 (Cambridge, Mass., 2000), passim.

⁵ Foss, *Byzantine and Turkish Sardis*, 51–52; “Sectors MMS/N, MMS, and MMS/S,” in C. H. Greenewalt, Jr., and M. L. Rautman, “The Sardis Campaigns of 1996, 1997, and 1998,” *AJA* 104 (2000): 645–56.

To the south a residential area with colonnaded streets and rich townhouses was developed in the fifth century. Before abandonment in the early seventh century, several spaces were converted to industrial activity, including dyeing or fulling and oil production.⁶

The city extended outside the city walls, along the banks of the Pactolus River where a three-aisled Christian basilica, "Church EA," was built in the fourth century and repaired and expanded through the seventh century.⁷ A large, unexcavated Justinianic basilica, "Church D," stands in the center of the city.⁸ The governor and metropolitan archbishop, who had their seats in the city, played a major role in the local economy, the former attested in inscriptions that show his activity in building or reconstructing public works.⁹

Sardis was a center of production and trade. Production operated at widely differing levels. On the large scale was the imperial factory for the manufacture of shields and armor for the entire diocese of Asia, part of a system established by Diocletian, organized on military lines and employing a large staff.¹⁰ Most production, though, was on the small scale of artisans who sold the goods they made themselves. Excavation of the Byzantine shops has revealed a variety of products including iron and bronze tools and vessels, as well as extensive evidence for dyeing cloth and for production and trade in the dyes themselves.¹¹ Crucibles and frit lying *in situ* when the shops were destroyed show that jewelry made of gilded copper alloy and glass inlay was still being made there.¹² Semiprecious stones including amethyst, jasper, and sard were worked by Sardinian craftsmen and were available for trade.¹³ Some metal items, chiefly buckles, were imported from Constantinople, eastern Europe, and south Russia.¹⁴

Pottery and terra-cottas dating into the seventh century were made from the local clay.¹⁵ Large numbers of amphoras, basins, and pithoi bespeak transport and storage of grains, oil, and wine. Imported pottery continued to reach Sardis into the seventh

⁶ M. L. Rautman, "A Late Roman Townhouse at Sardis," in *Forschungen in Lydien*, ed. E. Schwertheim (Münster, 1995), 49–66. For a residential area to the southeast, see now Greenwalt and Rautman, "Sardis 1996, 1997, 1998," 669–72, and the plan, fig. 1 on p. 644.

⁷ H. Buchwald in Hanfmann, *Prehistoric to Roman*, 196–210.

⁸ *Ibid.*, 196.

⁹ Foss, *Byzantine and Turkish Sardis*, 113, source 15, = F. Yegül, *The Bath-Gymnasium Complex at Sardis* (Cambridge, Mass., 1986), 171, no. 6.

¹⁰ Foss, *Byzantine and Turkish Sardis*, 14. A painted inscription identifies the tomb of a *dukenarios* of the imperial arms factory: Hanfmann, *Prehistoric to Roman*, 208. For evidence of primary iron making, see C. H. Greenwalt, Jr., et al., "The Sardis Campaigns of 1979 and 1980," *BASOR* 249 (1983): 28.

¹¹ Foss, *Byzantine and Turkish Sardis*, 14; Crawford, *Shops*, 15–17.

¹² M. Goodway and P. Vandiver in Crawford, *Shops*, 129–34.

¹³ Greenwalt et al., "Sardis 1979 and 1980," 28–29.

¹⁴ J. C. Waldbaum, *Metalwork from Sardis: The Finds through 1974* (Cambridge, Mass., 1983), 11, 117–20, nos. 689–702.

¹⁵ On clay deposits and minerals used for colorants, see H. Crane, "Traditional Pottery Making in the Sardis Region of Western Turkey," *Muqarnas* 5 (1988): 9–18; E. Hostetter, *Lydian Architectural Terracottas* (Atlanta, Ga., 1994), 35–40, 47–48.

century: African red slip, Late Roman C ware from Phokaia or other Aegean sites, lamps of iron-free clay, possibly from Syria, and transport amphoras from the eastern Mediterranean.¹⁶

Sardis was a center for glass production with two factories in operation when the city was destroyed. Cullet, wasters, and crucibles leave no doubt that windowpanes, lamps, dishes, and vessels were manufactured locally for use at Sardis and possibly for export.¹⁷ The quantity of glass and terra-cotta lamps shows that lighting was important to the residents and was widely available. Oil must have been plentiful.

Coin finds increase with issues of Phokas (208). Folles and half folles comprise 90% of the finds; very few fractional bronzes occur. The issues of Herakleios are even more numerous (621).¹⁸ Of the coins in the Byzantine Shops, 17% are early seventh-century issues dated no later than 616. Mints represented are Constantinople (60%), Nikomedeia (19%), Kyzikos (8%), and Antioch (2%); (9% are uncertain).

On the eve of the seventh-century destruction, the public buildings represented a central aspect of the ancient city, the availability of these monumental public works to the citizens. Three major baths were functioning, fed by aqueducts that reached into the neighboring Mount Tmolos. They provided a real service but were also a great drain on local resources.

The size of the population that enjoyed these buildings cannot be determined, but the extent of the city within the 4-km circuit of the city wall and beyond and the number of seats in the theater (about 20,000) indicate that it was substantial.¹⁹

The entire nature of Sardis changed after 616. The remains attest extensive destruction, followed by a total lack of evidence for almost a half century. In addition, some time in the seventh century an earthquake loosed a landslide from the acropolis which covered part of the temple of Artemis and caused the collapse of the gymnasium and other public buildings (Fig. 1). When evidence is again available, the city was fundamentally different: the ancient metropolis had become a field for ruins, while the new city focused on a castle on the ancient acropolis.

The first evidence for the medieval city dates from the mid-seventh century, when the main east-west road was rebuilt: a new pavement of cobblestones was laid over the

¹⁶ Crawford, *Shops*, 13–14; M. L. Rautman, “Two Late Roman Wells at Sardis,” *AASOR* 53 (1995): 37–84.

¹⁷ A. von Saldern, *Ancient and Byzantine Glass from Sardis* (Cambridge, Mass., 1980), 35–37.

¹⁸ T. V. Buttrey provides a conspectus of all the Byzantine coins found at Sardis through August 1972: “Byzantine Medieval and Modern Coins and Tokens,” in T. V. Buttrey et al., *Greek, Roman, and Islamic Coins from Sardis* (Cambridge, Mass., 1981), chap. 3. He excludes a hoard (H. W. Bell, *Sardis*, vol. 11, *Coins*, pt. 1, 1910–1914 [Leiden, 1916], viii–ix) as atypical of the bronze coinage in general circulation and suggests that it represents a military payment. See also M. F. Hendy, *Studies in the Byzantine Monetary Economy c. 300–1450* (Cambridge, 1985), 342. Excavation records suggest that finds from 1972 to 1995 do not alter the general picture.

¹⁹ Hanfmann, *Prehistoric to Roman*, 146, suggests between 60,000 and 100,000. S. Mitchell, *Anatolia* (Oxford, 1993), 1:244, finds this generous. Few cities had more than 25,000 *urban* inhabitants, which were outnumbered 10:1 by rural dwellers.

ruins of the shops and the colonnade. Finds of coins of Constans II in the former gymnasium date the work and suggest that it was carried out by a detachment of imperial troops, perhaps from the army of Thrace.²⁰

The same period, and perhaps personnel, was responsible for the massive fortification walls that surround the acropolis (Fig. 2). These are entirely faced with the marble taken from ancient buildings: column drums, architraves, inscriptions, and reused pieces of all kinds attest to the ruin of the ancient city.²¹ This large fortress (whose exact extent cannot be determined because of subsequent erosion of the hill) became and remained the center of medieval Sardis. Its walls sheltered a substantial settlement, much of it obliterated by later construction. Rebuilding of the road shows that the place was not isolated but still stood on a major route of communication between the coast and the interior of Asia Minor.

Construction of such a fortress (by far the largest of the region) illustrates the dominance of the military that marks the period and was notably manifested in the new administrative system, in which Sardis was no longer a capital but one of the bastions of the Thrakesion theme. It remained, however, the seat of the metropolitan archbishop, who retained his precedence in the church. Neither his headquarters nor the size of his establishment has been discovered. The fate of the Justinianic cathedral is unknown. It is possible that the bishop used Church EA in the western part of the city, which shows evidence of continuity through the whole period.²²

Evidence for the two centuries after 616 is extremely sparse. The city was captured by the Arabs in 716, when the remains of the fortress indicate destruction followed by a period of abandonment. Further depopulation would have followed the plague that ravaged the empire in the mid-eighth century. Economic and ecclesiastical activity, however, continued. A *διοικητης*, a financial official of the theme, is attested in the eighth and ninth centuries, and one bishop, Euthymios, a victim of the Iconoclasts, was active in the city before 787, when he converted many Iconoclasts back to orthodoxy. This perhaps reflects the role of the church as a center of education.²³

Sardis began a period of recovery in the ninth century and flourished without major change until the late eleventh.²⁴ Although the written sources are virtually silent, the remains of this period enable an image of the city to be reconstructed and with it an idea of the local economy. The fortress on the hilltop remained the dominant feature. Although it was heavily defended by walls and a covered gallery, it also contained a

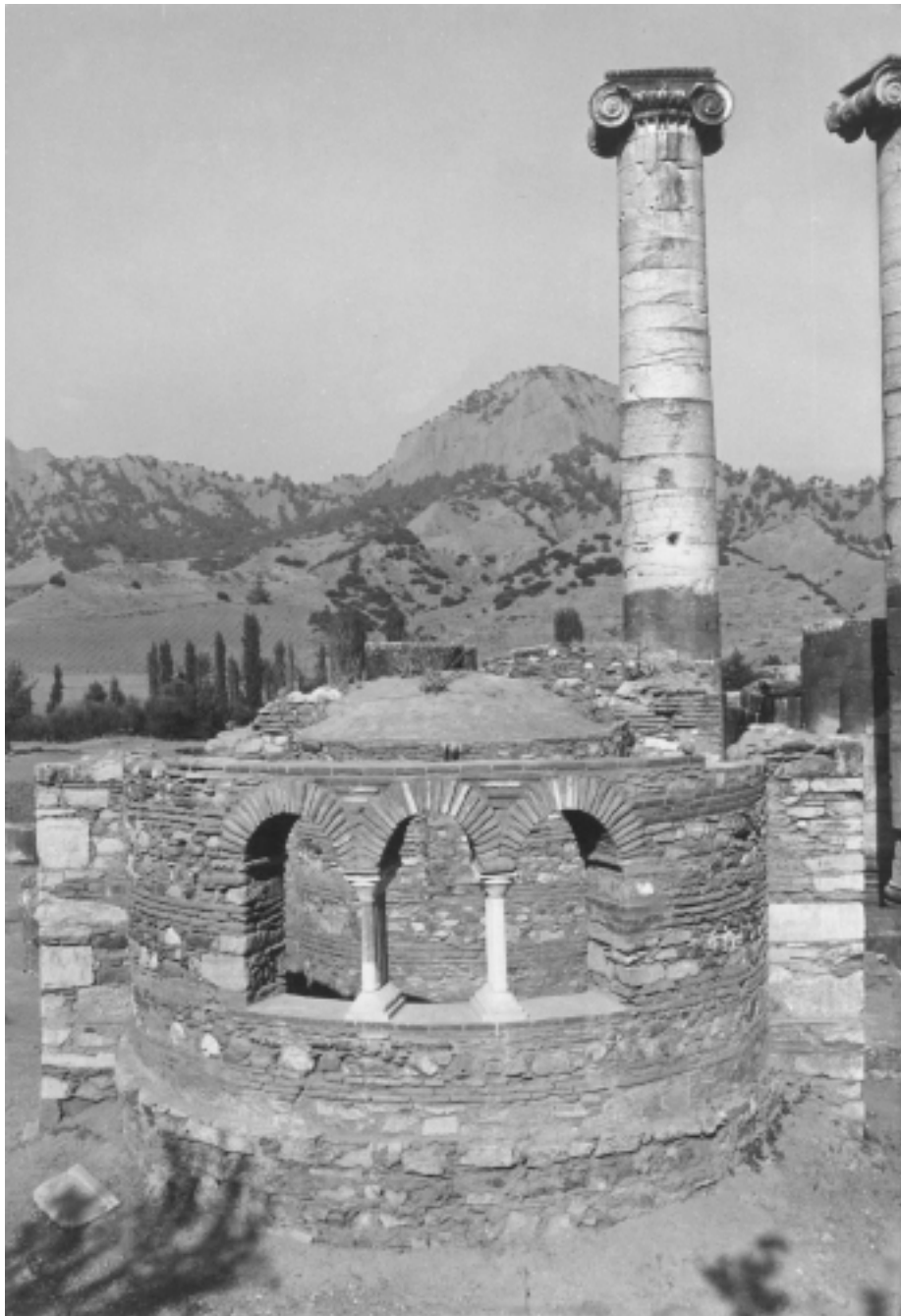
²⁰ Foss, *Byzantine and Turkish Sardis*, 57; Hendy, *Studies*, 641f; Buttrey in *Greek, Roman, and Islamic Coins*, 209. Twenty-eight examples associate the operation of a limekiln in the gymnasium with road work: Yegül, *Bath-Gymnasium Complex*, 90–91. R. L. Vann, *The Unexcavated Buildings of Sardis* (Oxford, 1989), 21, suggests that “Building A” was strengthened at the same time to provide a fortified barracks near the strategic east-west road.

²¹ Foss, *Byzantine and Turkish Sardis*, 57–59.

²² For this period, see *ibid.*, 61–66. For the trickle of coinage that resumes, see Buttrey in *Greek, Roman, and Islamic Coins*, 209.

²³ Foss, *Byzantine and Turkish Sardis*, 70f.

²⁴ *Ibid.*, 70f.



1. Sardis. Church M (as restored in 1973) built into the southeast corner of the temple of Artemis, the necropolis in the background. Courtesy of the Archaeological Exploration of Sardis/Harvard University (73.128:10)



2. Sardis. Entrance into the Byzantine fortifications on the acropolis, showing masonry taken from earlier buildings. Courtesy of the Archaeological Exploration of Sardis/Harvard University (70.211:36a)



3. Sardis. Apse of the basilica, Church EA, with the Laskarid Church E built within it. Courtesy of the Archaeological Exploration of Sardis/Harvard University (73.112:33)



4. Sardis. Medallion showing the Anastasis, first half of the eleventh century, from the Byzantine settlement on the acropolis. Courtesy of the Archaeological Exploration of Sardis/Harvard University (M61.9:403)

sizable residential district, with small houses closely packed together on no regular plan. These were usually about 5 m square, with one or more rooms and brick hearths. The settlement had its own graveyard, chapel, and water supply in the form of cisterns and essentially resembled a village, as did the others that lay scattered over the ancient site.

The largest of these lay around the former temple of Artemis, whose cella was converted into a large cistern from which terra-cotta water pipes led to the adjacent buildings. Here, as on the acropolis, supply of water was central, for the ancient aqueducts had long since ceased to function. Houses stood around the cistern, built of undressed stones laid in mud mortar. Some of them followed regular streets. This settlement also contained limekilns, showing that the late antique activity of burning the marble of the temple for lime was still practiced.

The only substantial church that provides evidence for this period is Church EA (Fig. 3). It was rebuilt with solid walls and piers over the fallen colonnade in the nave and decorated with fresco in the ninth century, an indication that the church had some resources. By the eleventh century, however, its atrium and parts of the nave had become a cemetery, while the narthex was inhabited. Except for a partially occupied late antique villa adjacent to it, the church seems to have stood in an area that was largely deserted.²⁵

After a hiatus of five hundred years, pottery datable to the twelfth century is plentiful. Finds of glazed pottery of the twelfth through fourteenth centuries include types associated with both the Aegean and Syrian traditions. Direct evidence of manufacture at Sardis is lacking, although the clay is certainly from nearby.²⁶ The widely disseminated Zeuxippos ware occurs with imports whose origin is not defined.²⁷ Blue glazed frit sherds imported from Rayy in the second half of the twelfth century are an exception and not part of a pattern of imports, although local types do emulate Syrian sgraffito wares.²⁸ Local earthenware imitations of Chinese celadons demonstrate the awareness and influence of fine imports.²⁹ Amphoras continued in use into the thirteenth

²⁵ H. Buchwald in Hanfmann, *Prehistoric to Roman*, 201.

²⁶ J. A. Scott and D. Kamilli, "Late Byzantine Glazed Pottery from Sardis," in *Actes du XV^e Congrès international d'études byzantines*, Athènes, 1976, vol. 2, *Art et archéologie* (Athens, 1981), 679–96. For continuity into the Turkish period, see H. Crane, "Some Archaeological Notes on Turkish Sardis," *Muqarnas* 4 (1987): 50, 54–56.

²⁷ J.-M. Spieser, "La céramique byzantine médiévale," in *Hommes et richesses dans l'Empire byzantin*, 2 vols. (Paris, 1989–91), 2:259, pl. 12c. Analysis is beginning to define sources: see S. Y. Waksman and J.-M. Spieser, "Byzantine Ceramics Excavated at Pergamon: Archaeological Classification and Characterization of the Local and Imported Productions by PIXE and INAA Elemental Analysis, Mineralogy, and Petrography," in *Materials Analysis of Byzantine Pottery*, ed. H. Maguire (Washington, D.C., 1997), 105–34; for the implication that similar wares were imported into Pergamon and Sardis from an unidentified source: pp. 107, 114, 117; for a possible connection between the two sites: p. 112, fig. D.

²⁸ Scott and Kamilli, "Glazed Pottery," 687; the Rayy fragments are identical to A. Lane, *Early Islamic Pottery* (London, 1947), pl. 43b.

²⁹ Scott and Kamilli, "Glazed Pottery," 687.

century.³⁰ One interesting group of vessels made of very heavy, rough fabric, with a large, inverted spout is not known to be paralleled elsewhere and may have been used in some sort of distilling process.

Industrial activity took place at the eastern edge of the ancient city, in an abandoned Roman bath ("CG"). Brick walls and furnaces, and debris found in the remains, indicate the production of glazed pottery, iron goods, and glass.³¹ Remains of a settlement have not been identified here, nor is the central part of the city, between this bath and the gymnasium, known. This could be an extremely important area for the present subject, since it contained the cathedral whose fate is unknown.

Although the physical record is necessarily incomplete, it suggests that medieval Sardis consisted of a powerful, densely inhabited hilltop fortification towering above a series of settlements scattered over the ruins of the ancient city. To some extent, the settlements seem to have been self-sufficient, with their own water supply and production of necessary goods on a small scale. With the possible exception of the ironworking at the Roman bath, there is no evidence that goods useful for trade were produced.

The connection between the different settlements cannot be determined, but they probably together constituted Sardis and centered on the acropolis for defense and probably administration, and on the cathedral for their spiritual needs. Several bishops of Sardis are known, but they almost invariably passed their careers in the greater comfort of the capital.³² The finds demonstrate that Sardis was not completely isolated. A network of roads through the Hermos valley, over the Tmolos Mountains, and from Thyateira through Sardis to Philadelphia still functioned.³³

The Laskarid period (1204–61) was the most prosperous. Sardis was a major city of a small kingdom, on the main highway between the emperors' favored residence (Nymphaion), treasury (Magnesia), and the frontier. At this time the old basilica (Church EA) was deliberately razed, and a new five-domed church (Church E) was built within its perimeter. Although it measures only 20 × 11 m, this was the first major construction in the city since the walls of the seventh century. It was built of brick and marble and was decorated with frescoes, gold and glass mosaics, and colored glass windows, perhaps made locally.³⁴ Kilns for the production of brick, tiles, and pipe in the gymnasium could be associated with this construction. They operated on a large scale and demonstrate the availability of quantities of fuel.³⁵

The church had a graveyard adjacent and was apparently the center of a settlement

³⁰ See Spieser, "Céramique," 253; G. M. A. Hanfmann, "Excavations at Sardis, 1959," *BASOR* 157 (1960): 36.

³¹ G. M. A. Hanfmann and J. C. Waldbaum, *A Survey of Sardis and the Monuments outside the City Walls* (Cambridge, Mass., 1975), 140–41, 186 n. 48; Waldbaum, *Metalwork*, 9; and probably glass, Von Saldern, *Glass*, 101–2.

³² For the history and remains of this period, see Foss, *Byzantine and Turkish Sardis*, 66–76.

³³ C. Foss in Hanfmann, *Prehistoric to Roman*, 15 and n. 18. For the routes in relation to Lydian fortifications, see C. Foss, "Late Byzantine Fortifications in Lydia," *JÖB* 28 (1979): 267–320.

³⁴ H. Buchwald, "Sardis Church E: A Preliminary Report," *JÖB* 26 (1977): 265–99; idem, in Hanfmann, *Prehistoric to Roman*, 201–4; von Saldern, *Glass*, 98.

³⁵ Yegül, *Bath-Gymnasium Complex*, 44, figs. 75–79.

of which little has survived. Whether this church was the cathedral of the city has not been determined, but one well-known bishop of this period, Nikephoros Chrysoberges, evidently spent time in the city, which, as a learned man, he may have made into a local center of education.³⁶ The metropolitan see was dissolved in 1369.

Coin finds increase dramatically during the Laskarid period, all from the mints of Nymphaion and Magnesia. Finds of Byzantine coins stop with Michael VIII (1261–82) and silver Crusader deniers appear to have filled in at a time when bronze coinage was missing. The last Byzantine coin discovered at Sardis was minted under John V (1341–91). Otherwise, no Byzantine issues mingle with the Islamic, which begin in the late fourteenth century.³⁷

By the fourteenth century the church had been desecrated and converted to industrial and living space where we find evidence for the survival of crafts into the fifteenth century. Glass bracelets and cakes of glass from which they were made belong to the thirteenth and fourteenth centuries. Imported glass vessels are from regions under Islamic rule.³⁸ The types and styles of locally made pottery remain the same in respect to decoration, material, and method of manufacture through the fourteenth century, but in the fifteenth century locally made imitations of cobalt glazed wares produced in the imperial kilns of Iznik occur.³⁹ Metal items were in use from the twelfth into the fifteenth century: iron tools, lead used in construction, copper alloy vessels, fittings, medallions (one showing the Anastasis) and jewelry, some gilded, and even examples of gold and silver (Fig. 4).⁴⁰

Other parts of the site did not change their nature: the fortress was always occupied, and the lime burning at the temple continued unabated. The acropolis furnished the last piece of evidence for the Byzantine period in the narrative of a Turkish attack of 1304. The Turkomans, threatened by the Mongols allied with Byzantium, proposed to the Sardians that they allow them to share the fortress. The locals refused and resisted a siege, but were finally forced to agree when they ran short of water and suffered from not being able to till their fields.⁴¹ In this account, the nature of the acropolis settlement becomes clear. Although some of its inhabitants may have been soldiers only, many were farmers, who worked land in the plain below, leaving the fortress every day to attend to agriculture, attested in the entire Byzantine record only here.

³⁶ Foss, *Byzantine and Turkish Sardis*, 84–86.

³⁷ Buttrey in *Greek, Roman, and Islamic Coins*, 224–26. M. L. Bates, in *ibid.*, 227, sees the deniers as testimony to the close economic ties between the emirate of Sarukhan and the Frankish merchants and trading colonies.

³⁸ Von Saldern, *Glass*, 98–102.

³⁹ Crane, “Turkish Sardis,” 50.

⁴⁰ Waldbaum, *Metalwork*, 53, 58, 62, 67, 78, 90, 92, 124–26, 129, 130–32, 136–37.

⁴¹ Foss, *Byzantine and Turkish Sardis*, 82f, 121–24.

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The Urban Economy of Pergamon

Klaus Rheidt

The acropolis of Pergamon, situated on a steep, mountainous spurlike formation between the valleys of the Selinos and Ketios Rivers, towers over the wide plain of the Kaikos. The Kaikos is one of the large rivers that have their sources in the highlands of Anatolia and, with a westward course, flow into the Aegean. Since Hellenistic times, the fertile middle valley of the Kaikos constituted the core of the kingdom of Pergamon, from which the fast-growing town drew its agricultural resources.¹ Whereas the Hellenistic city had been restricted to the fortified hill and its southern slopes, as early as the second century A.D. the center of settlement began to shift to the plain, where there was enough water and space for new public buildings and luxurious houses.² By the fourth and fifth centuries, when the townscape was already characterized by magnificent Byzantine churches³—such as the large basilica with two-storied side aisles built into the temple formerly dedicated to the Egyptian deities, and the basilica built in the Hellenistic lower agora—the acropolis was gradually losing its significance. The settlement on the southern slope of the fortified hill was soon almost completely deserted. A large number of older, abandoned dwellings had already been looted around 270 A.D. to provide the building materials for a ring of fortifications to hold back the Goths.⁴

The center of the settlement of Pergamon in late Roman and early Byzantine times

This chapter was translated by Nikos Petropoulos and John Solman.

¹ Cf. W. Radt, *Pergamon: Geschichte und Bauten, Funde und Erforschung einer Antiken Metropole* (Cologne, 1988), 15ff, 24ff.

² On the buildings in the lower city, see E. Boehringer, "Pergamon," in *Neue deutsche Ausgrabungen im Mittelmeergebiet und im Vorderen Orient* (Berlin, 1959), 136ff, and K. Rheidt, *Die Stadtgrabung*, pt. 2, *Die byzantinische Wohnstadt* (Berlin, 1991), 41ff; U. Wulf, "Der Stadtplan von Pergamon," *IstMitt* 44 (1994): 156ff. On the water supply, see Radt, *Pergamon*, 167ff.

³ Rheidt, *Byzantinische Wohnstadt*, 182ff, 193ff, 226ff, 237, 243. For the church in the temple of the Egyptian deities, see O. Deubner, "Das Heiligtum der alexandrischen Gottheiten in Pergamon genannt 'Kizil Avli,'" *IstMitt* 27/28 (1977–78): 227ff. For the church in the lower Agora, see W. Dörpfeld, "Die 1900–1901 in Pergamon gefundenen Bauwerke," *AM* 27 (1902): 31ff.

⁴ A. Conze, *Stadt und Landschaft* (Berlin, 1913), 299, 358; Wulf, "Stadtplan," 169f; M. Klinkott, *Die Stadtmauern*, pt. 1, *Die byzantinischen Befestigungsanlagen* (Berlin, 2001), 8ff; K. Rheidt, "Pergamon and the Byzantine Millennium," in *Pergamon, Citadel of the Gods*, ed. H. Koester (Harrisburg, 1998), 397.

lay at the foot of the fortified hill; the residential settlement expanded from the center of the Roman city, where the churches were erected later, far out into the plain⁵ (Fig. 1). Archaeological finds in the lower city, and particularly in the area of the Asklepieion, show that this settlement remained in use until at least the sixth century and that it was rebuilt many times over.⁶ The area of early Byzantine Pergamon, not including the acropolis, measured at least 230 ha, so that the number of inhabitants that can be inferred must exceed 35,000.⁷ Apart from the two churches, both dating from the fourth/fifth centuries, little can be said about the layout or construction of the town, since its remains have almost completely disappeared under the new buildings of the provincial town of Bergama. In the sixth century, the economic potential of Pergamon seems, nevertheless, to have been great enough to allow the building of a massive fortification wall across the southern hillside (Figs. 1, 2), thanks to which the acropolis and the southern terraces became a safe refuge for a large part of the population.⁸

From the seventh century, at the latest, the population of Pergamon dropped dramatically—a phenomenon also observed in many other towns of Asia Minor—as a result of the advance of the Persians and the Arabs right up to the Aegean coast. The unfortified sections of the settlement in the plain were most vulnerable to the regular and devastating incursions of the attackers from the east, and therefore had to be gradually abandoned. Numismatic finds show that the ancient acropolis, with the early Byzantine walls, was used again in the 670s; it served as an occasional shelter for the population of the lower city and probably also as a military base.⁹ Even so, by the early eighth century the city of Pergamon had apparently become so depopulated that not even these walls could be defended satisfactorily. The once-important ancient metropolis had ceased to exist as an urban settlement, and in 716 A.D. the castle fell to Maslama ibn Abd al-Malik, who established his winter quarters in the area.¹⁰

Until the first half of the eleventh century, the site remained largely deserted, although toward the end of the ninth century and in the course of the tenth the fortified hill seems to have accommodated a military post. We have no buildings or finds of any

⁵ W. Radt, "Die byzantinische Wohnstadt von Pergamon," *Diskussionen zur archäologischen Bau-forschung* 3 (1978): 203; Rheidt, *Byzantinische Wohnstadt*, 241ff and fig. 47; Wulf, "Stadtplan," 160ff.

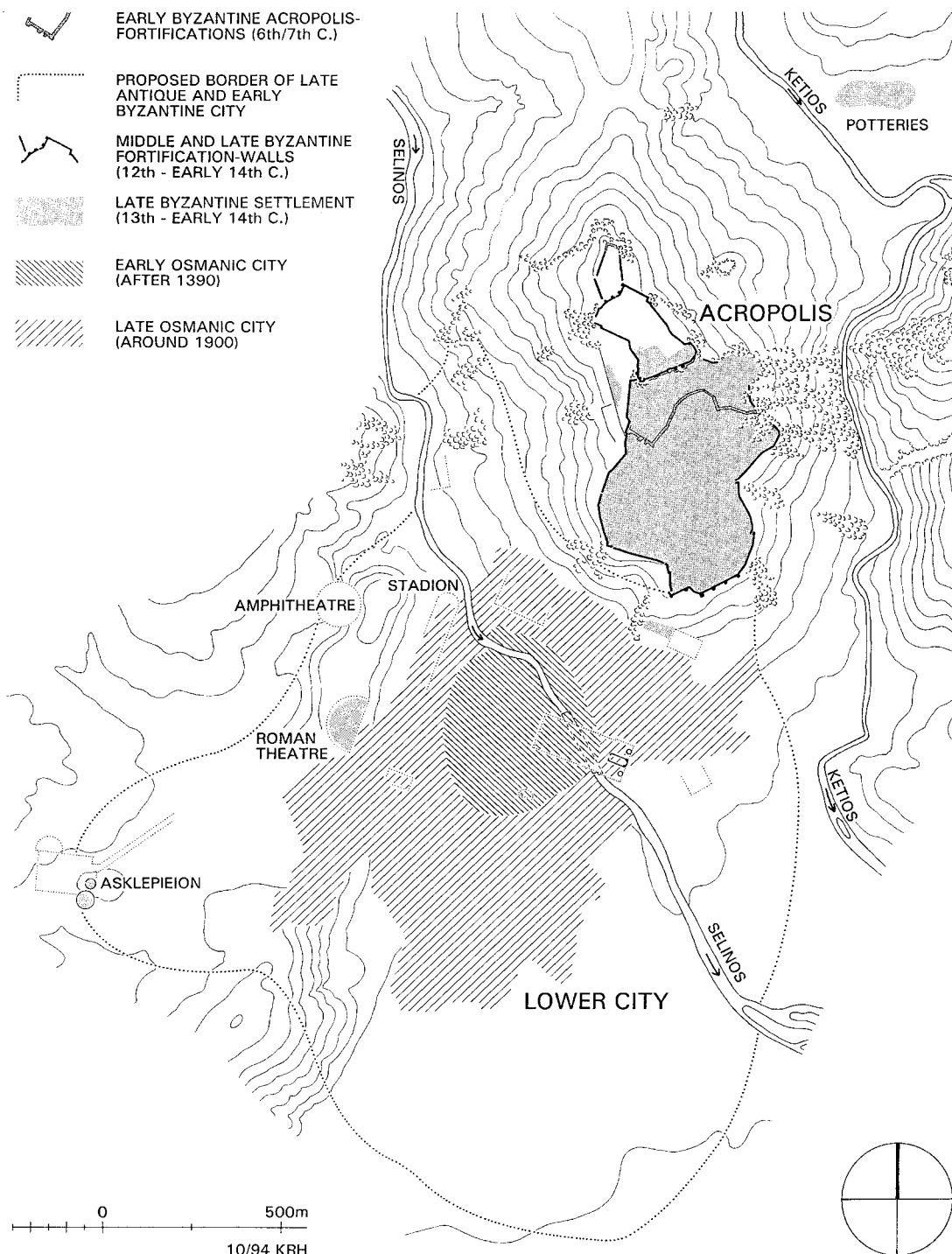
⁶ Rheidt, *Byzantinische Wohnstadt*, 188ff, 192ff; G. de Luca, *Das Asklepieion: Via Tecta und Hallenstraße, Die Funde* (Berlin, 1984), 18ff, 45ff, 82, 154ff.

⁷ Wulf, "Stadtplan," 166ff. If the populated surface extended beyond this line to reach the elevated ridges, as has been suggested, then the population that can be assumed is possibly even greater. Cf. Rheidt, *Byzantinische Wohnstadt*, 237; idem, "Pergamon," 399ff.

⁸ Rheidt, *Byzantinische Wohnstadt*, 168ff, 244; idem, "Die obere Agora: Zur Entwicklung des hellenistischen Stadtzentrums von Pergamon," *IstMitt* 42 (1992): 277ff, 281; Klinkott, *Befestigungsanlagen*, 19ff, 32f, suggests a date in the 7th century A.D.

⁹ C. Morrisson, "Die byzantinischen Münzen," *Pergamenische Forschungen* 8 (1993): 10ff; Rheidt, *Byzantinische Wohnstadt*, 245.

¹⁰ K. Rheidt, "Byzantinische Wohnhäuser des 11. bis 14. Jahrhunderts in Pergamon," *DOP* 44 (1990): 197; Rheidt, *Byzantinische Wohnstadt*, 245ff; H. Gelzer, *Pergamon unter Byzantinern und Osmanen* (Berlin, 1903), 49ff; Klinkott, *Befestigungsanlagen*, 28ff; Rheidt, "Pergamon," 401f.



1. Development of the city of Pergamon in Byzantine and Ottoman times (scale 1:20,000)
 (after K. Rheidt, *Die Stadtgrubung* pt. 2, *Die byzantinische Wohnstadt* [Berlin, 1991], 242, fig. 47)



3. The hillside of Pergamon with the late Byzantine fortifications of the Gymnasium, viewed from the south (photo: E. Steiner, Pergamon Archives of the German Archaeological Institute, Istanbul)



4. Pergamon, excavations in the city. Byzantine storeroom with two jars. The jar to the south was probably used for storing wine, since the remains of distilled pine or cypress resin were found inside it (photo: E. Steiner, Pergamon Archives of the German Archaeological Institute, Istanbul)

sort from that time.¹¹ The first archaeological indications of resettlement come from the last quarter of the eleventh century. At that time, cisterns were fitted to some of the substructures of the temple of Trajan inside the fortified wall (Fig. 2).

Under Manuel I Komnenos (1143–80), Pergamon seems for the first time to have regained specific central functions affecting the surrounding area and the village settlements around it. The new theme of Neokastra had its seat on the fortified hill of Pergamon, and Manuel extended its defensive structures.¹² Numismatic and ceramic finds indicate that within the castle a new settlement developed, with a church at its center in place of the ancient sanctuary of Athena, and in fact it was soon elevated to metropolitan status.¹³ The new settlement expanded fast in the following centuries, and around the middle of the thirteenth century occupied almost the entire southern slope of the hill. The number of inhabitants of this small rural settlement can be inferred from the features and relative density of the complexes of houses excavated to date, which were partly separated by wide, open spaces: with up to eight people in each residential unit and not more than three hundred house complexes, Pergamon could accommodate a maximum of 2,400 inhabitants in those times.¹⁴

During the reign of Emperor Michael VIII Palaiologos (1261–82), the isolated sections of settlements merged into one relatively extensive set of buildings on the southern hillside. In addition, small rural settlements emerged within the area of the ancient, but still reasonably well preserved, ruins of the lower city (Fig. 1). Along the streets and lanes, craftsmen and merchants set up their modest shops. Clearly, this residential area of town was no longer sufficiently protected by the late Roman walls, yet the building of a new wall was not undertaken until the reign of Andronikos II (1282–1328). This wall, which, with mighty towers, would have surrounded the entire city, was never completed¹⁵ (Figs. 1–3). The population of Pergamon seems to have profited from the imperial investment, as the impressively increasing frequency of coin finds from that period shows. Even the powerful earthquake that struck the city in June 1296¹⁶ could not halt its ever-greater density and prosperity. The reconstruction of the ruined dwellings with new stone floors and carefully built brick stoves clearly

¹¹ Pergamon is mentioned as one of the cities of the Thrakesion theme set up by Leo III and later belonged to the maritime theme of Samos. Gelzer, *Pergamon*, 62ff, 75ff. Cf. Rheidt, *Byzantinische Wohnstadt*, 246; Klinkott, *Befestigungsanlagen*, 31f.

¹² *Nicetae Choniatae Historia*, ed. I. Bekker (Bonn, 1835), 194ff, describes Pergamon in this context as πόλις and πολίχνιον. Cf. K. Rheidt, “Chliara: Ein Beitrag zur spätbyzantinischen Topographie der pergamenischen Landschaft,” *IstMitt* 36 (1986): 225ff, 241ff; Rheidt, *Byzantinische Wohnstadt*, 247ff; idem, “Pergamon,” 402f; Klinkott, *Befestigungsanlagen*, 35ff.

¹³ Morrisson, “Byzantinische Münzen,” 10ff; Rheidt, *Byzantinische Wohnstadt*, 155ff, 164ff, 197, 247ff.

¹⁴ Rheidt, *Byzantinische Wohnstadt*, 238ff.

¹⁵ Rheidt, *Byzantinische Wohnstadt*, 249ff; Klinkott, *Befestigungsanlagen*, 87ff; Conze, *Stadt und Landschaft*, 307ff and insert 64.

¹⁶ *Georgii Pachymeris De Michaelae et Andronico Palaeologis libri XIII*, ed. I. Bekker (Bonn, 1835), 2:233ff; Rheidt, “Chliara,” 227.

testifies to the economic prosperity of the city, whose population rose to more than 3,000 inhabitants toward the end of the thirteenth century.¹⁷

For all the extensions to the fortifications, the advance of the Turks could not be halted. By the beginning of the fourteenth century, the whole of Asia Minor, with the exception of a few mightily fortified cities, was in Turkish hands. Many a peasant from the surrounding area sought refuge behind the walls of Pergamon. The never-ending stream of refugees and the shortage of food supplies eventually caused even more complicated problems. Malnutrition and disease spread in the area of the settlement within the city walls, which was now crammed with people. The residential units, once relatively spacious, were split up again and again in order to take in more newcomers and make room for a population that was probably far in excess of 4,000 inhabitants.¹⁸

Around the middle of the second decade of the fourteenth century, the city of Pergamon fell to the Turks. The settlement on the mountain was entirely deserted and left to decay. Most of the Christian peasants from the area around the castle, who had sought refuge within the walls, were led back to their fields as captives and slaves. In the small Turkish settlement at the foot of the castle hill, on either side of the Selinos River (Fig. 1), the few remaining Christian families were reduced to the status of a tolerated minority. Even so, around the middle of the fourteenth century they were able to build a modest monastery on one of the less attractive sites among the ruins; the monastery must have played some part in the administration of the small community that remained. Archaeological indications as to the duration of the use of these structures do not go beyond the year 1389.¹⁹ After that, the hillside was finally abandoned as a place of settlement. The Christian population, not exceeding a few hundred, was of no importance either numerically or financially for the development of the Ottoman province over the following centuries.

After the complete dissolution, in the seventh and early eighth centuries A.D., of what was left of the city of late antiquity, Pergamon lost any economic potential for many centuries to come. Not until after urbanization was resuscitated on the hillside toward the end of the eleventh century do we find any indications of commercial activities, in the form of stores and workshops that supplied the garrison of the castle and the small settlement huddled in it. The ordinary stores and workshops along the traffic routes consisted mostly of only one room, but sometimes there was also a small antechamber that was probably roofed. In the area of the residential city on the southern slope of the mountain, excavated from 1973 to 1993 by the German Archaeological Institute, such arrangements were found principally on the main way to the acropolis and along a path that, passing between the former sanctuary of Demeter and the classical Gymna-

¹⁷ Rheidt, "Byzantinische Wohnhäuser," 197ff, and *Byzantinische Wohnstadt*, 200, 239, fig. 46 and table 7.

¹⁸ Rheidt, *Byzantinische Wohnstadt*, 239, 251. On the health conditions of the population, see M. Schultz, "Ergebnisse osteologischer Untersuchungen an mittelalterlichen Kinderskeletten unter besonderer Berücksichtigung anatolischer Populationen," *Anthropologischer Anzeiger* 47.1 (1989): 39ff.

¹⁹ Rheidt, *Byzantinische Wohnstadt*, 202, 232ff, 252; K. Rheidt, "Bogazköy und Pergamon: Zur byzantinischen Klosterarchitektur in Kleinasien," *IstMitt* 43 (1993): 479ff.

sium, leads from the south straight up the mountain (Fig. 2). Finds from older excavations show that there had been commercial establishments near the ruins of the Altar of Pergamon and in the vicinity of the substructure belonging to the south stoa of the upper Gymnasium. Excavations conducted by the local museums in the valley of the Ketios River led to the additional conclusion that here, as in classical times, there must have been pottery workshops in the middle and late Byzantine periods²⁰ (Fig. 1).

The dwellings and most of the shops and workshops in the late Byzantine residential city of Pergamon were built of stones taken from the decayed ancient structures.²¹ From the material of archaeological finds, we can now draw certain conclusions about the nature of some of the goods produced and sold here. Signs of the production of metal and particularly of iron goods are most common. Not far below the acropolis there were businesses producing stirrups, snaffle-bits and chains, and also tools and weapons; in other words, items of equipment, which were probably used by the garrison of the castle. The area of the excavated residential city also yielded a number of smithies, in which nails, metal fittings, wires, hooks, cramp-irons, rings, and horseshoes were the main products, that is, items for the everyday needs of this predominantly agricultural settlement. Elsewhere, smaller objects were made of copper and bronze, including needles, clasps, belt buckles, and hinges. On the middle terrace of the Gymnasium, directly behind the late fortification walls, a hoard of finds indicates that iron jugs, buckets, pans, sickles, plows, axes, shovels, and other tools were produced or sold²² (Fig. 2).

Apart from these metal items, glass items were also produced, especially glass armlets, which were evidently very popular. Finds of these so-called *millefiori* were made in three places directly north of the main way to the acropolis (Fig. 2, G). The armlets were produced by simply drawing out the melted glass into small bars. By melting the glass bars together and twisting them with different colors, the production of multicolored jewelry was quite easy. In other stores, very large amounts of pottery were found, most of it consisting of pots, jugs, and amphoras for everyday use. There are no archaeological traces of the production of pottery within the residential area of the town. The shops where these large numbers of vessels have been found presumably used them for the storage of food and other goods. The production of the pottery took place northeast of the acropolis, in the valley of the Ketios with its extensive deposits of clay. Apart from the unglazed ware, which represents the biggest part of the archaeological material, considerable quantities of pottery with green, yellow, and brown glazes have

²⁰ Rheidt, *Byzantinische Wohnstadt*, 151, 170, 194ff, 209. On the pottery workshops along the Ketios, see S. Erdemgil, "Kestel Kurtarma Kazısı," *II. Kazı Sonuçları Toplantısı* (Ankara, 1980), 104ff, and S. Erdemgil, "Kestel Kazısı 1980 Yılı Çalışmaları, III," *Kazı Sonuçları Toplantısı* (Ankara, 1981), 64. Cf. also, Ş. Karagöz, W. Radt, and K. Rheidt, "Ein römischer Grabbau auf dem Niyazitepe bei Pergamon," *IstMitt* 36 (1986): 102, fig. 1.

²¹ Radt, "Wohnstadt," 207. K. Rheidt, "Bautechnik und Bautradition im byzantinischen Pergamon," *Diskussionen zur archäologischen Bauforschung* 5 (1991): 187f. Rheidt, *Byzantinische Wohnstadt*, 21ff. Cf. also C. Bouras, "City and Village: Urban Design and Architecture," *JÖB* 31 (1981): 635.

²² W. Altmann, "Die Arbeiten zu Pergamon, 1902–1903: Die Einzelfunde," *AM* 29 (1904): 199f, figs. 30–32. Conze, *Stadt und Landschaft*, 325f, figs. 117a–c. Cf. Rheidt, *Byzantinische Wohnstadt*, 210; idem, "Pergamon," 404.

been found. The plates, bowls, and jugs often bear geometrical or figurative sgraffito designs. The open vessels usually have three scars from the tripod-shaped legs used for separating the pots during baking. Many of these legs have been found in the southern part of the upper terrace of the ancient Gymnasium, an indication that the color glaze on the middle and late Byzantine pottery was applied to it within the confines of the settlement.

There are also enclosed spaces that, because of their position along the street, must have been of a commercial nature, though there are no specific finds of any kind to confirm this. It can be assumed that these would have been places where textiles and other goods for everyday consumption were manufactured, repaired, sold, and bought. However, apart from occasional raised platforms or courses of masonry suggestive of low walls, no trace of these commercial activities has remained.²³

The processing of agricultural products took place mostly inside the dwellings, which often contained one or more storerooms with large jars for the storage of crops, cereals, or olive oil (Fig. 4). Chemical analysis of the remains of the contents inside some of these vessels showed distilled resin of pine or cypress, which had been used since ancient times for sealing containers and as a preservative in the storage of wine. The majority of the vessels date from the second half of the thirteenth century. Therefore, it seems that during that period at least viticulture was extensively practiced in Pergamon.²⁴

Economic activity in Pergamon between the end of the twelfth century and the beginning of the fourteenth, as far as it can be substantiated by the archaeological finds, confirms the picture that we can also deduce from the unplanned layout of the settlement, where public buildings were inconspicuous and no central spaces²⁵ existed, and from the construction of the simple groups of houses: the predominant orientation of this settlement was agricultural. There was barely any production of goods whose use exceeded everyday needs, such as weapons or jewelry. Nor can we infer any particular economic activity from the increased circulation of coins in the last quarter of the eleventh and toward the end of the thirteenth century.²⁶ This is merely an indication that the city acquired some special significance for the defense of the empire and that there was a flow of money from the capital to Pergamon for the extension of the fortifications. Like many other Byzantine provincial towns, Pergamon was a *metropolis* without any real urban traits. The economic transactions of the settlement did not transcend its direct agricultural milieu. The results of extensive archaeological excavations have not pointed to any sort of exchange of goods with remote parts or with the capital. Ultimately, the Turkish conquest of the town had a beneficial consequence at least as far as the economy was concerned: with the end of compulsory fortification, the unattractive settlement on the hillside could at last be abandoned, and the population,

²³ Rheidt, *Byzantinische Wohnstadt*, 210f.

²⁴ Rheidt, "Byzantinische Wohnhäuser," 198f; idem, *Byzantinische Wohnstadt*, 213ff.

²⁵ Rheidt, "Byzantinische Wohnhäuser," 203f.

²⁶ Morrisson, "Byzantinische Münzen," 11f.

released from the constant fear of devastation, were once again able to return to their villages and cultivate the fields in the fertile plain of the Kaikos.

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Thebes

Aspasia Louvi-Kizi

The role of Thebes¹ as a place of importance has been documented since the early Christian era.² After invasions by Huns and Slavs, Justinian walled the city.³ The fortified city of Thebes became capital of the theme of Greece after the ninth century, a position it retained until the end of the twelfth century.⁴ The prosperity of the city was inextricably bound up with the production and manufacturing of silk in the area, activities which boosted the growth of its trade and its economy. The agricultural produce of the fertile Lake Copais area (wine, olive oil, cereals)⁵ made a further contribution to the economic well-being of the city, but silk continued throughout the Byzantine and Frankish periods to reign unchallenged as the city's major source of wealth.⁶ Development of the systematic production of silk in Thebes seems to have begun around the middle of the eleventh century.⁷ The product was of the highest quality, and it was made entirely in privately owned units, whether these were houses or industrial premises.⁸

This chapter was translated by John Solman.

¹ The basic works used here are D. Jacoby, "Silk in Western Byzantium before the Fourth Crusade," *BZ* 85 (1992): 452–500; A. Savvides, "Η Βυζαντινή Θήβα 996/7–1204 μ.Χ." *Ἱστοριογεωγραφικά* 2 (1988): 33–52; Ch. Bouras, "City and Village: Urban Design and Architecture," *JÖB* 31.2 (1981): 611–53; S. Symeonoglou, *The Topography of Thebes from the Bronze Age to Modern Times* (Princeton, N.J., 1985); Ἀρχαιολογικὸ Δελτίο (ΑΔ) Χρονικά (1917–1986); P. Armstrong, "Byzantine Thebes: Excavations on the Kadmeia, 1980," *BSA* (1992): 295–335; *The Itinerary of Benjamin of Tudela*, trans. M. Adler and A. Asher, ed. M. Signer (Malibu, Calif., 1993).

² The bishop of Thebes was among the participants in the Council of Serdica (343); see A. Komenes, "Ἐπισκοπικοὶ κατάλογοι Θηβῶν," *Ἐπ. Ἐτ. Στερ. Μελ.* 18. For the importance of the city as a center in the production of art, see J.-P. Sordini, "Mosaïques paléochrétiennes de Grèce," *BCH* 94 (1970): 699–753.

³ Prokopios, *De aed.* 4.3.5.

⁴ Savvides, "Βυζαντινή Θήβα," 33–35, 38.

⁵ J. Koder and F. Hild, *Tabula Imperii Byzantini*, vol. 1, *Hellas und Thessalia* (Vienna, 1976), 269–71, and J. Herrin, "Realities of Byzantine Provincial Government: Hellas and Peloponnesos, 1180–1205," *DOP* 29 (1975): 253–84.

⁶ For the role of Thebes as a center in the production of silk, see Savvides, "Βυζαντινή Θήβα," and Jacoby, "Silk in Byzantium," which provides a complete bibliography on the subject.

⁷ Jacoby, "Silk in Byzantium," 481.

⁸ *Ibid.*, 467.

The great importance of Thebes can be seen in the particular references made to it in the texts of the successive treaties by which commercial privileges were conceded to Venice. These treaties, concluded between the time of Alexios Komnenos (1082) and the end of the twelfth century, led to the progressive safeguarding of the right of the Venetian merchants resident in Thebes to own silk factories and to trade in their product at greatly reduced tariff rates.⁹ The quality of Theban silk was also connected with the Jewish presence in the city, whose silk producers and craftsmen had formed guilds long before the Norman invasion of 1147.¹⁰ The fact that the Normans forcibly removed the silk workers to Sicily does not seem to have had much impact on the production of silk in Thebes. Only a few years later, Benjamin of Tudela (1165) found in Thebes a flourishing community of two thousand Jews whose members included the best-known makers of silk and purple-dyed cloth.¹¹ The landownership register of Thebes rounds off this picture of prosperity, providing evidence that the city—the see of a metropolitan bishop—was also home to a very vigorous local aristocracy.¹² After 1204, Thebes became the see of the Latin archbishop and, with all of Boeotia, Attica, and the Megarid,¹³ was irrevocably severed from the trunk of the Byzantine Empire. Social changes occurred, but the city continued to prosper, thanks to the same sources of wealth. In the late thirteenth century, Nicholas II de St. Omer reinforced the walls with towers and built a luxurious palace in the Kadmeia.¹⁴

Today, with the exception of the Frankish tower in the precinct of the Museum, almost nothing has survived of the walls, streets, palaces, houses, and workshops of medieval Thebes. Even the churches can be located only by archaeological excavation or have preserved features of their original appearance in a form that is hard to decipher.¹⁵ The assemblage of information about Byzantine Thebes is thus confined to the archaeological finds that have been coming to light continuously since the early twentieth century. It is extremely difficult to reach any conclusions on the basis of these finds, given that the city has been occupied without interruption since prehistoric times.¹⁶ However, most of the finds come from the early Christian and Byzantine strata, re-

⁹ R.-J. Lilie, *Handel und Politik: Zwischen dem byzantinischen Reich und den italienischen Kommunen Venedig, Pisa und Genua in der Epoche der Komnenen und der Angeloi, 1081–1204* (Amsterdam, 1984), 210–13, and esp. Savvides, “Βυζαντινή Θήβα,” 41–42.

¹⁰ Savvides, “Βυζαντινή Θήβα,” 42, and Jacoby, “Silk in Byzantium.”

¹¹ *Itinerary of Benjamin of Tudela*.

¹² N. Svoronos, “Recherches sur le cadastre byzantin et la fiscalité aux XI et XII siècles: Le cadastre de Thèbes,” *BCH* 83 (1959): 1–145.

¹³ Savvides, “Βυζαντινή Θήβα,” 51.

¹⁴ W. Miller, *Essays on the Latin Orient* (Cambridge, 1921), 76.

¹⁵ Bouras, “City and Village,” 625.

¹⁶ In 1968, E. Vakalopoulou (Ἀρχιτεκτονικά θέματα 2 [1968]: 100–107) proposed the removal of the then-modern city of 15,000 people from the Kadmeia, the historic center of Thebes for centuries. Since that time, the modern-day city, now with a population of 45,000, has been reconstructed, principally where the buildings inside the Kadmeia are concerned. Over that period, the Archaeological Service—under intense pressure from the needs of the reconstruction process—recorded the successive strata revealed by the continuous rescue excavations.

vealed by rescue excavations.¹⁷ Mosaic floors have been identified at various points of the confusing early Christian strata in the Kadmeia¹⁸ and also outside it, where the finds were primarily of burials.¹⁹

The finds almost everywhere in the Byzantine strata are of an architectural nature,

¹⁷ The fate of the medieval strata was not a particularly happy one: on the one hand, the purpose of the archaeologists was primarily to identify the prehistoric strata, and on the other, archaeologists specializing in Byzantine antiquities worked systematically on the Byzantine strata only after 1979. In most cases, the records of those strata are disappointingly brief, and thus the information brought together in the Χρονικά of the Ἀρχαιολογικό Δελτίο is all the more valuable even today. S. Symeonoglou, in *Thebes*, was the first scholar to assemble all the archaeological evidence discovered up to 1973. Of the 270 recorded archaeological sites, the Byzantine ones are noted on two topographical charts, bearing the general archaeological site's numeration. These records also include information collected directly from the archaeologists who carried out the excavations from 1974 to 1976. Most of them are to be found in ΑΔ for those years, which came out after the publication of Symeonoglou's book. In this chapter, I propose a supplementary map noting the published early Christian and Byzantine strata identified during the period from 1976 to 1987, that is, to the time of the last ΑΔ published. The Symeonoglou numbering has been retained and extended, so as to aid readers who may wish to consult the ΑΔ. The corresponding references are as follows: position 270: ΑΔ (1972): 321, ΑΔ (1973): 285, and ΑΔ (1974): 430, 455; position 271: ΑΔ (1974): 437; position 272: ΑΔ (1974): 441; position 273: ΑΔ (1975): 128; position 274: ΑΔ (1976): 121; position 275: ΑΔ (1976): 126 (the Pagonas house); position 276: ΑΔ (1976): 126 (the Kokinis house); position 277: ΑΔ (1976): 126 (the Drakos house); position 278: ΑΔ (1976): 126 (the Bardosas house); position 279: ΑΔ (1976): 126 (the Koukoulis house); position 280: ΑΔ (1976): 127 (the Anastasiou house); position 281: ΑΔ (1976): 127; position 282: ΑΔ (1977): 98 and ΑΔ (1978): 78; position 283: ΑΔ (1978): 115 (the Yannopoulos house); position 284: ΑΔ (1978): 115 (the Zaroukian house); position 285: ΑΔ (1978): 115; position 286: ΑΔ (1978): 115 (St. 104, Pyri); position 287: ΑΔ (1978): 117; position 288: ΑΔ (1978): 117; position 289: ΑΔ (1979): 166; position 290: ΑΔ (1979): 166; position 291: ΑΔ (1979): 172 (Kolonaki); position 292: ΑΔ (1980): 217 and Armstrong, "Excavations," 295–335; position 293: ΑΔ (1980): 218; position 294: ΑΔ (1980): 220 (the Ziomas house); position 295: ΑΔ (1980): 220 (the Stefanos house); position 296: ΑΔ (1981): 189 (corner of Oedipos and Kaloktenous Sts.); position 298: ΑΔ (1981): 191, ΑΔ (1982): 77, and ΑΔ (1984): 68; position 299: ΑΔ (1981): 192; position 300: ΑΔ (1981): 77; position 301: ΑΔ (1982): 165; position 302: ΑΔ (1982): 169; position 303: ΑΔ (1982): 170; position 304: ΑΔ (1982): 239; position 305: ΑΔ (1984): 68; position 306: ΑΔ (1984): 27, ΑΔ (1987): 117–18, and Τεχνολογία 3 (1989): 23–24; position 307: ΑΔ (1986): 27; position 308: ΑΔ (1986): 28; position 309: ΑΔ (1986): 28–29; position 310: ΑΔ (1987): 118; position 311: ΑΔ (1987): 119. A total of 112 Byzantine positions had been found inside the Kadmeia and 72 outside it by 1987.

¹⁸ At position 221: early Christian burials (Keramopoulos, ΑΔ [1917]: 120). At position 18: with burials, an early Christian floor (ΑΔ [1965]: 237, 253–55, ΑΔ [1966]: 189–91, ΑΔ [1969]: 188, study of which has confirmed the existence of a local workshop (Sodini, "Mosaïques," 699–753). At position 270: apart from findings relating to a Byzantine church (Keramopoulos, ΑΔ [1917]: 66; Orlandos, Ἀρχ.Βυζ.Μνημ.Ἑλλά. [1939]: 121, 144), an early Christian floor has also been identified (ΑΔ [1972]: 321). Floors with the same decoration were also found on the adjacent sites (positions 266 and 270); these presumably belonged to the same building, whose use is difficult to determine (ΑΔ [1977]: 430 and 455–59, and ΑΔ [1979]: 321). At position 273: the floor of an early Christian bath has been identified on two adjacent sites (ΑΔ [1975]: 134, and Ἀρχαιολογικά Ἀνάλεκτα ἐξ Ἀθηνῶν [1980]: 139). At position 287: a floor with simple single-colored tesserae (ΑΔ [1978]: 117). At position 296: an early Christian floor, probably dating from the 5th century (ΑΔ [1984]: 68). At position 297: an early Christian mosaic floor with laminae (ΑΔ [1981]: 189). At position 300: part of an early Christian mosaic (ΑΔ [1982]: 77). At position 307: another early Christian floor (ΑΔ [1984]: 68).

¹⁹ Keramopoulos (ΑΔ [1917]: 100–120), catacombs at Kastellia; a cemetery with twenty-four tombs on Kolonaki hill, in use between early Christian and late Byzantine times (ΑΔ [1979]: 172).

with a particular wealth of pottery. Of these finds, only those of position 292 have been studied and published to date.²⁰ Byzantine walls have been identified in sixty excavations. In more than half these sites, storage diggings have been recorded, and some have underground pipes (Fig. 1). The mere number of the “Byzantine storage diggings,” “small masonry storage vessels,” “rubbish disposal pits, plastered inside,” “storage jars” or “masonry storage jars,” “pear-shaped plastered diggings,” or simply “Byzantine stores” or “tanks-stores” mentioned in the “Chronicles” of the *Archaiologikon Deltion* as being located all over the city gives some idea of the special importance for these finds for the general urban fabric of Thebes. Unfortunately, however, not one of the scores of pits referred to in the “Chronicles” has been accurately surveyed. In a few cases, some of their dimensions are given,²¹ varying from 1.50 to 3.50 m in depth and from 1.20 to 3.10 m in maximum diameter. In most cases, the depth is not recorded, although there is one reference to a “pear-shaped pit” with a depth of 9 m.²² Only in one case are we given all three of the dimensions of a pit: it was 3.50 m deep, had an opening with a width of 1.30 m, and its maximum diameter was 2.60 m,²³ thus giving it a capacity of approximately 30 m³. It is worth noting that (as far as I am aware) most of these pits were lined with water-resistant plaster, thus confirming their use for storage purposes. We could hypothesize that the pits up to 2 m deep were used to store agricultural produce; as for those of a greater depth, they must have been for the purpose of collecting water and would have been linked to the city water supply network.

According to the account given by the “lost ancient biography” of St. John Kaloktenes, metropolitan of Thebes, among that cleric’s charitable works was the “introduction into the town of exceedingly fine water,” for which purpose he seems to have constructed an aqueduct that brought the water into the Kadmeia from the height on the south side of the city.²⁴ This twelfth-century construction project is shown on the map of Fabricius,²⁵ and was located along the axis of Epaminondas Street, outside the south side of the walls. This position is confirmed by the accounts of local people²⁶ recorded before the arches of the aqueduct (the *kamares*) were totally demolished in the early twentieth century.

Sections of underground pipes—some consisting of earthenware sections, some built from stone, some hewn from rock—have been identified in various parts of the city.²⁷ However, the network of underground pipes has been recorded with such brevity

²⁰ Armstrong, “Excavations,” 295–335.

²¹ Positions 14 and 304, ΑΔ (1965): 239; position 236, ΑΔ (1971): 227; position 249, ΑΔ (1976): 127; position 275, ΑΔ (1975): 126; positions 94 and 295, ΑΔ (1980): 220; position 311, ΑΔ (1986): 28–29.

²² Position 14, ΑΔ (1965): 239.

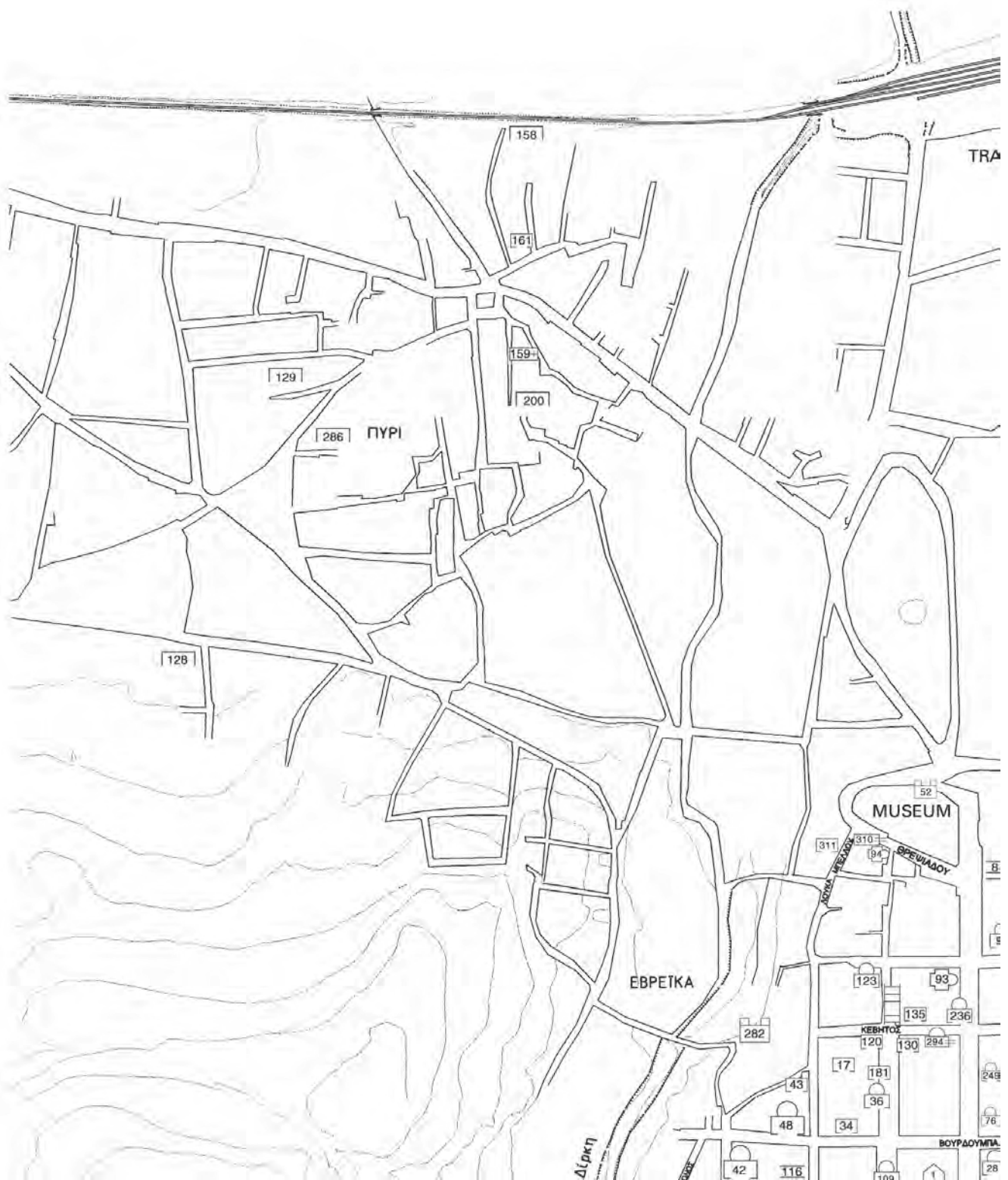
²³ ΑΔ (1965): 239.

²⁴ V. Delvenakioutou, “Ο μητροπολίτης Ἰωάννης ὁ Καλοκτένης καὶ αἱ Θῆβαι (Athens, 1970), 72–73.

²⁵ E. Fabricius, *Theben: Eine Untersuchung über die Topographie und Geschichte der Hauptstadt Boetiens* (Freiburg, 1980).

²⁶ Delvenakioutou, Καλοκτένης, 73, and ΑΔ (1917): 123 n. 2.

²⁷ Position 267: ΑΔ (1972): 321; position 116: ΑΔ (1968): 212; position 273: ΑΔ (1975): 128; position 274: ΑΔ (1976): 121; position 278: ΑΔ (1976): 126; position 281: ΑΔ (1976): 127; position 283: ΑΔ (1978): 115; position 287: ΑΔ (1978): 117; position 290: ΑΔ (1979): 166; position 292: ΑΔ (1980):



1b. Thebes, map of the modern city with indications of archaeological finds based on bibliography to 1994 (copyright: the author)

NEW QUARTER

TRAIN STATION













Αγ.
Θεόδωροι

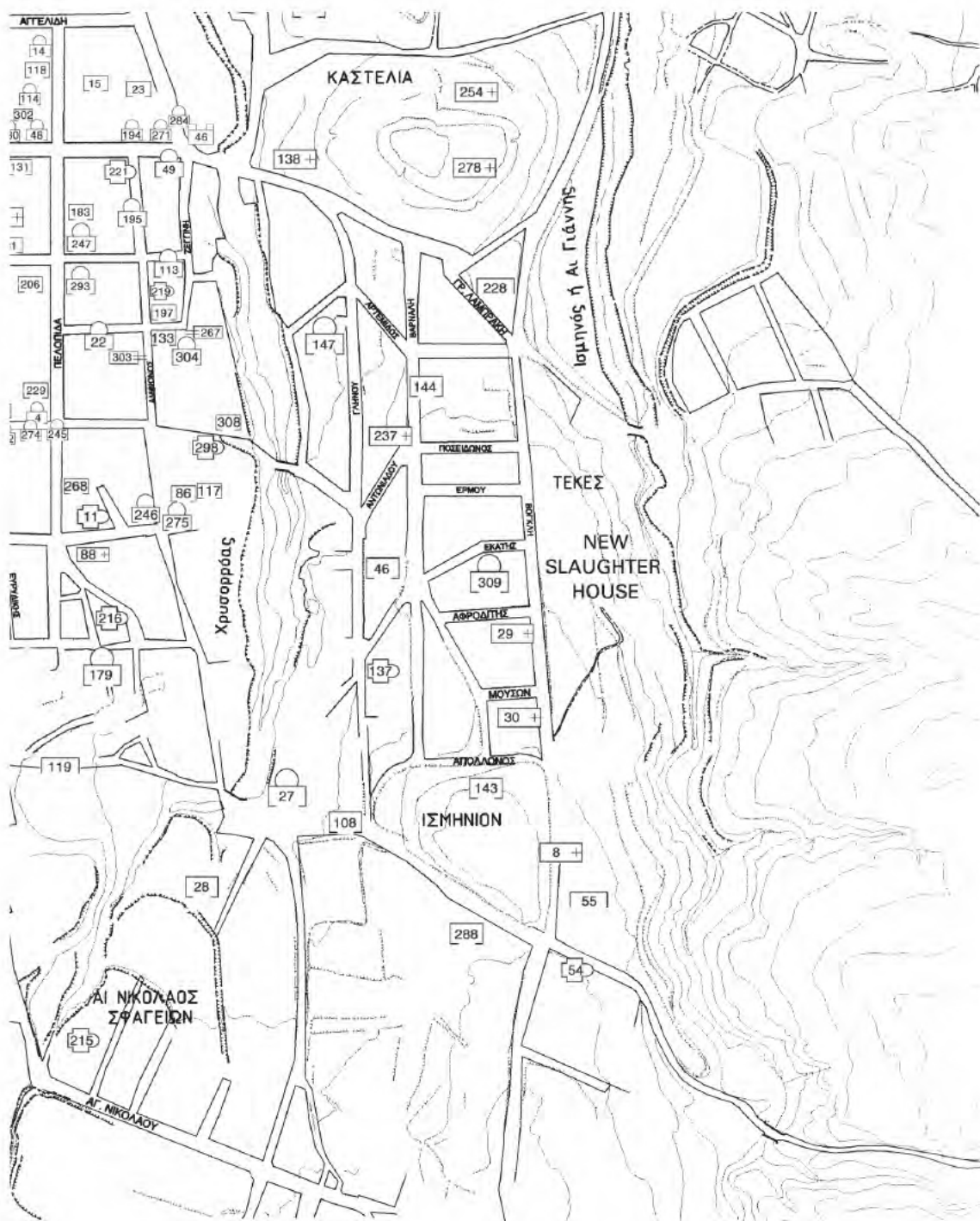
OLD QUARTER

ΧΡΥΣ. ΣΜΥΡΝΗΣ

ΑΥΛΙΔΟΣ

ΚΑΣΤΕΛΙΑ

- | | | |
|--|--|--|
|  pipe |  palaces |  church |
|  house with pipe |  pit |  house |
|  house with silo and pipe |  street |  house with silo |
|  grave |  aqueduct |  tower of city wall |



145

- | | | |
|--|--|--|
| | | |
| | | |
| | | |
| | | |

that it is impossible to reconstruct it. Yet there clearly must have been such a network, whose purpose was to distribute the water from the main raised aqueduct in the Kadmeia and around its outside. The underground network also probably bore some relation to the huge storage diggings, lined with water-resistant plaster, that served to store the water needed by the houses of the medieval city. The fact that broken pieces of pottery have been found in these pits seems to have been the result of a change of use. After a certain date, some of the diggings ceased to be used as water tanks, perhaps because they leaked, because there was less need for water, or for other reasons of which we know nothing. At this time, they became stores. A study of the pottery found in them could date the change in use and might help us formulate some hypotheses.

In his seminal paper on the urban fabric of Byzantine cities, C. Bouras used the data published in the *Archaiologikon Deltion* to 1971 in order to demonstrate that Byzantine Thebes spread outside the Kadmeia to the Kastelli heights, to the hills of the Ampheion and the Ismenion, to Kolonaki hill (where burials have been found), and to neighboring settlements such as Pyri and Tachi.²⁸ Despite this expansion, however, the fortified nucleus of the city continued to be the Kadmeia. A review of the finds made to date will lead us to accept that the walls that Justinian repaired must have been those of the Kadmeia, which continued to be the circumvallation of Thebes during Byzantine times²⁹ and in the period of Latin occupation.³⁰ The locations of the Byzantine water supply network and of the architectural finds demonstrate that the Byzantine city had spread outside the Kadmeia, most notably to the east, between the Chrysoroas and Ismenos streams. There was less expansion to the south, while to the west, in the direction of the Dirke stream, very few finds have come to light (and very little excavation has been done). To the northwest, toward Pyri, the finds become more frequent again (Fig. 1).

Unfortunately, it is now impossible to attribute specific identities to the buildings that have been excavated, whether on the Kadmeia or elsewhere. A very few of them, such as those at positions 1 and 2, have, with many reservations, been described as the houses of aristocrats.³¹ On Mikro Kastelli hill, at position 139 (outside the Kadmeia), it has been speculated that there was a Byzantine country house.³² A more secure description of the finds might result from a correlation of adjacent and successive exca-

217; position 294: AA (1980): 220; position 299: AA (1981): 192; position 302: AA (1982): 165; position 309: AA (1986): 27, and AA (1987): 117–18.

²⁸ Bouras, "City and Village," 622–25.

²⁹ At position 282 (the Koropoulis site), a retaining wall stretching for 18.5 m along the southeast part of the Kadmeia has come to light (AA [1977]: 98 and AA [1978]: 108–12). The manner of construction of this wall seems to support a dating to the 11th century. It may be a repair or buttressing of the Justinianic wall.

³⁰ Of the Frankish wall at position 52, a tower has survived in the museum garden, and its systematic excavation and development seem to promise much for research. Sections of walls that must have belonged to other towers in the same wall have survived in positions 19 and 46. See Symeonoglou, *Thebes*, 245–46, 255.

³¹ 'Αρχ.Εφ. (1930): 31; AA (1966): 177–81; AA (1964): 195, 212; Symeonoglou, *Thebes*, 213–24.

³² AA (1968): 214, fig. 8.

vated sites, wherever this is possible, for example, along Oedipos Street.³³ At position 112, nine pits “including water pipes” were found laid out in an extremely complex manner with division into smaller areas.³⁴ The number of storage diggings caused this building to be described as the house of a wealthy family. Perhaps it should be borne in mind that position 270 (where the Town Hall now stands), directly adjacent to 112, yielded an early Christian mosaic. This was the continuation of a mosaic floor found later on the Loukos site (position 266) and the Koropoules site (position 27), on Pindaros Street to the west and south of the Town Hall.³⁵ It was observed on the latter site that in Byzantine times the lower early Christian walls had been lined with water-resistant plaster, thus converting the structure into a water tank³⁶ equipped with run-offs. Right next to this, at position 283 on Oedipos Street, earthenware pipes and pits of the same period were discovered.³⁷ Similar finds came to light at the adjacent positions 274, 275, and 4,³⁸ with numerous deep diggings. Unfortunately, during this sequence of excavations no record was made of the depth of the pits or even of their exact numbers. However, they were numerous and linked by pipes, enabling them to store many cubic meters of water, from which it follows that they should in no circumstances be ascribed to domestic use, even that of a mansion house. The number of such pits, in conjunction with the floor plan of the building at position 112, makes it more reasonable to suppose that this must have been a workshop. Processing of the cocoons, for example (reeling and suffocation),³⁹ requires large quantities of water, as does the tanning of leather.⁴⁰ In fact, it seems that the water of Thebes contributed to the outstandingly high quality of the silk produced there.⁴¹ Similar observations can be made in connection with the finds at positions 284–271, 194, and 49, at the east end of Vourdoumbas Street, in the Kadmeia above the Chrysoroas stream, and with those of the city block enclosed by Vourdoumbas, Pindaros, Kevitos, and Pelopida Streets (positions 14, 249, 118, 114, and 280).

The other finds of pits and pipes inside and outside the Kadmeia are isolated. It would be difficult to describe them as belonging to workshops, and they probably ought to be ascribed to the network of domestic water supply pipes⁴² leading to the plaster-lined diggings. At position 285, however, three rock-hewn chambers—one circular and two square—may well have belonged to a workshop outside the Kadmeia.⁴³

³³ At positions 266, 270, 283, 112, 274, 245, and 4.

³⁴ AΔ (1968): 208, fig. 3.

³⁵ The Loukos site: position 266, AΔ (1972): 321 and AΔ (1973): 285–86. The Koropoulis site is also shown on the map, as part of the major excavation at position 270; AΔ (1974): 455–59.

³⁶ AΔ (1974): 455.

³⁷ AΔ (1978): 115.

³⁸ AΔ (1976): 121; Ἀρχαιολογικὰ Ἀνάλεκτα ἐξ Ἀθηνῶν (1975), 192–99, and AΔ (1968): 183, pl. 194b.

³⁹ P. Gangoulia et al., Ἡ σιροτροφία στὸ Σουφλί (Athens, 1992), 86–91.

⁴⁰ Although the *Hexabiblos* makes no reference to restrictions on the operation of tanneries in towns, the fact that an important church (position 270) was located nearby makes it unlikely that the buildings were used for that purpose.

⁴¹ Jacoby, “Silk in Byzantium,” 145.

⁴² AΔ (1982): 165 and AΔ (1980): 220.

⁴³ AΔ (1978): 115.

Furthermore, the large water tank at position 286 (Pyri) must certainly have been constructed for manufacturing purposes.⁴⁴ It is not easy to point to evidence as to the type of product manufactured on these premises, as, indeed, is the case with most of the workshops that have been noted. The only workshop site that has been documented after systematic excavation and published—in summary form, but with extremely useful conclusions—is that of position 306, opposite the Dirke fountain.⁴⁵

Dye shops have been located on the basis of the interpretation, by the archaeologist C. Kilakou, of archaeological data that are far from easy to read: “wells, circular tanks lined with mortar, shallow depressions hewn in the rock to be used as basins and fireplaces,” “short channels . . . that enabled a liquid of some sort to be moved from one basin to another,” and recesses above the tanks “into which some moving part could be fitted.” The hearths with ash and sections of tools found among the rubble masonry walls of the workshop supplement the picture of manufacturing premises that, according to the archaeological evidence (dating of pottery and coins) must have operated from the late eleventh century until being abandoned early in the fourteenth century.⁴⁶ The hypothesis that these buildings were used for dyeing—a process that requires large quantities of water—is supported by the presence of an underground water pipe at a higher level (hewn from the limestone and running southeast-northwest), which led water straight into the workshop, and of a runoff drain in the direction of the stream at the northern extremity of the excavation site. It seems reasonable to connect this workshop with the nearby Jewish quarter (to the northwest of the Kadmeia, Fig. 1). As for its position at some distance from the city and close to the Dirke stream, an explanation should perhaps be sought in the constraints placed on dye shops in the *Hexabiblos*.⁴⁷

In Thebes today, it is very difficult to find even the few features that remain to testify to the great prosperity of the Byzantine city, whose medieval identity has disappeared forever in more than a century of digging. The archaeological picture to be pieced together from the brief descriptions emerging from the excavations is a supplement to our knowledge of the economic well-being of the city as it can be adduced from the sources.

Archaeological evidence to date tends to support the view that the part of the city that lay outside the Kadmeia, particularly to the east and north (in the direction of Pyri) was never walled.⁴⁸ An assessment of the finds shows that the east side of the city outside the Kadmeia, between the Chrysoroas and Ismenos streams, repeats the urban picture of the Kadmeia itself, though undoubtedly in looser form: churches, houses,

⁴⁴ ΑΔ (1978): 115.

⁴⁵ ΑΔ (1986): 87 and ΑΔ (1987): 117–18; C. Koilakou, “Βυζαντινά ἐργαστήρια (βαφῆς;) στὴ Θῆβα,” *Τεχνολογία* 3 (1989): 23–24.

⁴⁶ Koilakou, “Βυζαντινά ἐργαστήρια,” 24.

⁴⁷ *Constantini Harmenopuli, Manuale legum sive Hexabiblos*, ed. G. E. Heimbach (Leipzig, 1851).

⁴⁸ Unfortunately, it has not proved possible to find any information about the Byzantine (?) wall that may at some time have been excavated close to the railway station. The large and extensive classical wall seems to have passed across this point and would then have been quite close to the Kadmeia.

and buildings with storage diggings and pipes stretch from the Ismenion to Hagioi Theodoroi and allow us to assume that there must have been quite a number of workshops in this area, operating among other structures. On the west side, however, along the Dirke stream outside the wall of the Kadmeia, the picture is different: no urban buildings have been found there, but there are numerous large dyeworks. They stand close to the old Evraika (Jewish) quarter, which gives rise to hopes that more workshops may yet be found in the vicinity.

The archaeological finds that have come to light so far allow us to make a deductive and hesitant identification of silk manufacturing and, perhaps, tanning workshops. We can thus confirm, within the urban fabric, the historical views of David Jacoby, who, relying only on the written sources, wrote that "we may safely assume that many Theban *archontes* . . . owned urban structures that could be converted into workshops or were already used as such, as well as dwellings fit for the housing of silk artisans."⁴⁹ The process of utilizing the Byzantine finds, which has begun over the last few years, promises to shed light on our hypotheses and enhance our knowledge of medieval Thebes.

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⁴⁹ Jacoby, "Silk in Byzantium," 479.

Medieval Athens

Maria Kazanaki-Lappa

The kindness of the earth remains the same, the mildness of the climate, bringing forth fruit and all other plants, honey-sweet Hymettus, serene Piraeus; . . . and the Acropolis remains the same, where I now sit, and it seems to me that I tread upon the very edge of heaven.

—Michael Choniates

Athens, the city that symbolized the classical world, was throughout the medieval period a small provincial town in the Byzantine Empire to which the sources rarely refer, and then only coincidentally. Its history from the end of the sixth century to the Turkish conquest of 1456 can be divided into three periods: the Dark Ages (7th–9th centuries), when life in the city continued but was confined to a small area around the Acropolis; the middle Byzantine period (10th–12th centuries), when Athens grew and can truly be said to have flourished (as witnessed by the large number of churches built during this time); and the period of Frankish rule (13th–15th centuries), under the rule, successively, of French, Catalan, and Italian dukes, when the Acropolis was converted into a medieval castle and the city shrank to a settlement huddled at the foot of the rock (Figs. 1 and 2).¹

The medieval city succeeded its ancient forebear on the lower slopes of the rock and around the Acropolis, where it was protected by a triple belt of fortifications.² The ancient wall of Themistocles, repaired by Valerian in the mid-third century A.D. formed

This chapter was translated by John Solman.

¹ For the medieval history of Athens, see F. Gregorovios and Sp. Lambros, *Ἱστορία τῆς πόλεως τῶν Ἀθηνῶν κατὰ τοὺς μέσους αἰῶνας*, 3 vols. (Athens, 1904–1906); Sp. Lambros, *Αἱ Ἀθῆναι περὶ τὰ τέλη τοῦ δωδεκάτου αἰῶνος* (Athens, 1878); K. Setton, “Athens in the Later Twelfth Century,” *Speculum* 19 (1944): 179–207; idem, “The Archaeology of Medieval Athens,” *Essays in Medieval Life and Thought, Presented in Honor of Austin Patterson Evans*, ed. J. Mundy, R. W. Emery, and B. N. Nelson (New York, 1955), 227–58, reprinted in K. Setton, *Athens in the Middle Ages* (London, 1975); J. Herrin, “Realities of Byzantine Provincial Government: Hellas and Peloponnesos, 1180–1205,” *DOP* 29 (1975): 255–87.

² The book by J. Travlos, *Πολεοδομικὴ ἐξέλιξις τῆς πόλεως τῶν Ἀθηνῶν ἀπὸ τῶν προϊστορικῶν χρόνων μέχρι τῶν ἀρχῶν τοῦ ΙΘ' αἰῶνος* (Athens, 1960), 135–72, brings together all the conclusions reached by research to that time about the medieval city and summarizes it in the form of maps. With minor revisions produced by subsequent research, those conclusions still represent our knowledge of the medieval topography of Athens. See Ch. Bouras, “City and Village: Urban Design and Architecture,” *JÖB* 31.2 (1981): 626–27.

the outermost fortified precinct and the furthest limit to which the city expanded during its periods of relative prosperity. The late Roman wall, built shortly after the catastrophic raid of the Heruli in A.D. 267 and enclosing a small area north of the Acropolis and the area from the Odeion of Herodes Atticus to the west side of the Theater of Dionysos on the south side of the rock,³ was the inner precinct and the principal defensive wall of Athens. On the rock itself, the walls of the Acropolis surrounded the monuments of classical antiquity, which though converted were still intact. This wall was the last line of defense, and inside it the population took refuge in the event of raids. All three lines of defense were repaired and reinforced with towers in the sixth century as part of Justinian's program of reconstructing the castles of cities all over Greece.⁴ It was this system of walls that enabled Athens to survive through the Dark Ages, when the cities of Byzantium were threatened by the Slavs on land and the Arabs by sea.

In the late Roman period, Athens had flourished for the last time as one of the empire's centers of education and as the focus for the development of Neo-Platonic philosophy. It can be deduced from the sources and from the finds of excavations that the Greco-Roman tradition and the slowly emerging Christian world coexisted peacefully in Athens to the late fifth century.⁵ When Justinian closed the schools of philosophy (in 529), Christianity gained the upper hand in Athens, and the city could now clearly be seen to be in decline. In the late sixth century, and throughout the seventh, the ancient temples—the Parthenon, the Erechtheum, the temple of Hephaistos—were converted into churches.⁶ A raid by the Slavs (dated to 582) struck yet another blow at the city. The evidence for this raid consists of a layer of destruction in the ancient Agora in conjunction with the hoards of coins found in the stratum and also outside the Agora, at the Dipylon Gate and on the Acropolis.⁷

During the two centuries that followed, we have little historical testimony to the fate of Athens, and excavations have yielded only scanty finds. The demographic shrinkage and the restriction in urban economic activity by which the provincial cities of Byzantium were hit in the seventh and eighth centuries can be perceived in Athens, too. Throughout that period, the city was confined to a small part of what had once been its area, that is, within the narrow bounds of the late Roman wall. Outside the wall, the city had been abandoned, and there are only occasional traces of building activity, including the repair of certain buildings in the ancient Agora and the replacement by a three-aisled basilica of the Tetraconch, the quatrefoil marble church that had been

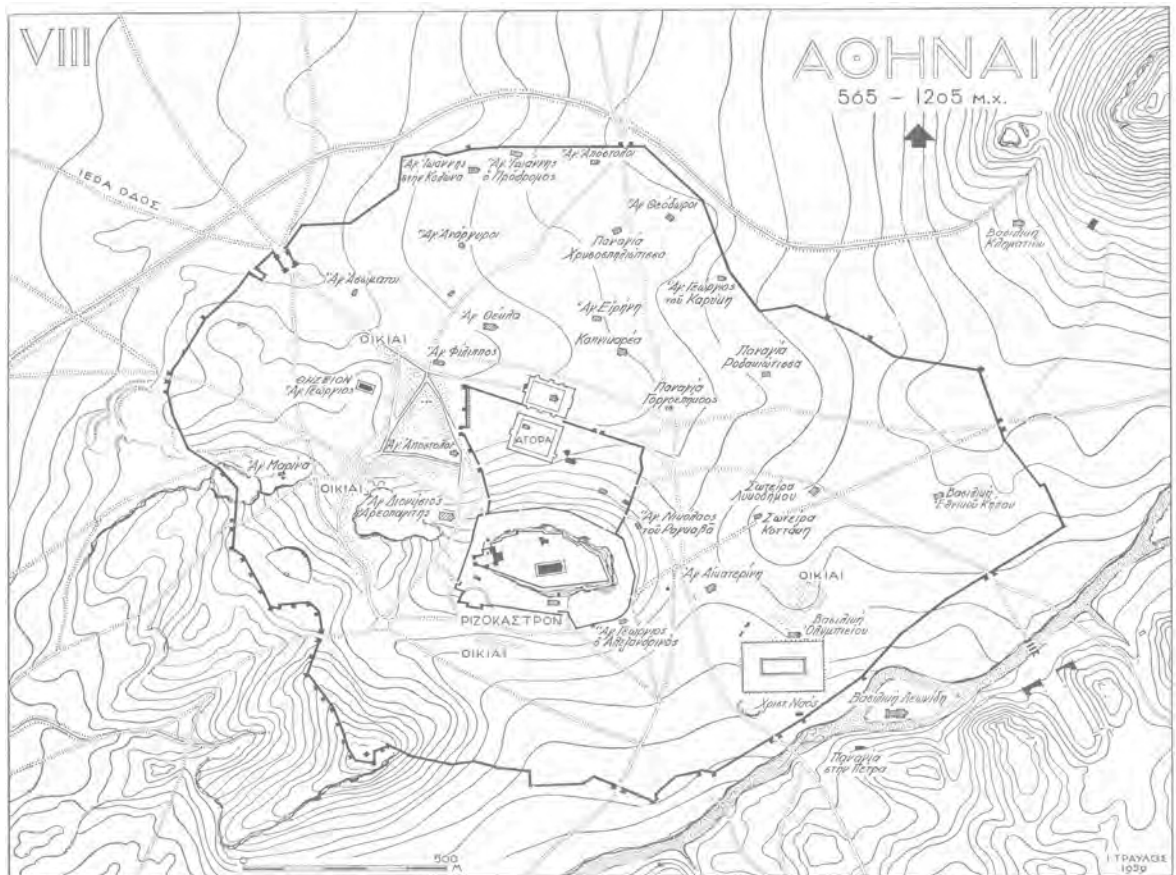
³ M. Korres, *AA* 35.2 (1980): 1.19.

⁴ Prokopios, *De aed.* 4.2.272; Travlos, *Πολεοδομικὴ ἐξέλιξις*, 144–45.

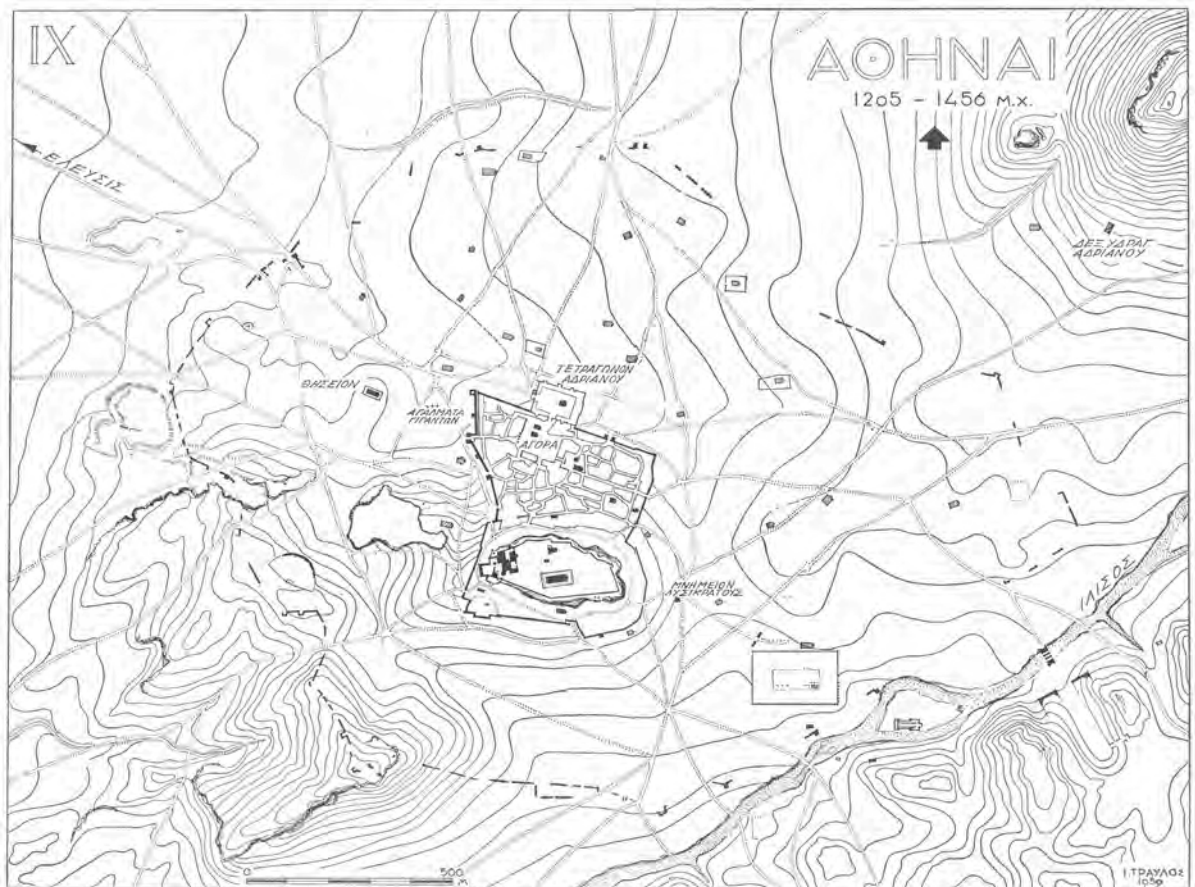
⁵ H. A. Thompson, "Athenian Twilight, A.D. 267–600," *JRS* 49 (1959): 61–72.

⁶ A. Frantz, "From Paganism to Christianity in the Temples of Athens," *DOP* 19 (1965): 187–207. On this subject, cf. C. Mango, "The Conversion of the Parthenon into a Church: The Tübingen Theosophy," *Δελτ.Χριστ.Αρχ.* Et. 18 (1995): 201–3.

⁷ D. M. Metcalf, "The Slavonic Threat to Greece circa 580: Some Evidence from Athens," *Hesperia* 31 (1962): 134–57; A. Frantz, *Late Antiquity, A.D. 267–600*, *The Athenian Agora* 24 (Princeton, N.J., 1988), 93–94.



1. Plan of Athens from the Justinianic period to the Frankish conquest (after J. Travlos, Πολεοδομική εξέλιξις της πόλεως τῶν Ἀθηνῶν ἀπὸ τῶν προϊστορικῶν χρόνων μέχρι τῶν ἀρχῶν τοῦ 10' αἰῶνος [Athens, 1993], 162)



2. Plan of Athens during the Frankish period (after Travlos, Πολεοδομική εξέλιξις, 172)

constructed in the courtyard of the Library of Hadrian and destroyed by fire.⁸ Kilns for the manufacture of tiles and olive oil production installations have also come to light in the Agora, among the ruins of the buildings of the Metroön and the “Gymnasium of the Giants.”⁹ The economy of Athens was based on the cultivation of the soil, and the produce grown was consumed locally; the circulation of money dwindled,¹⁰ trade declined, and manufacturing was restricted to meeting the needs of the local population.

Despite its decline, Athens was still a small but secure center for the civil, military, and ecclesiastical administration, as can be concluded, indirectly, from the accounts given in the sources. The walls, and especially those of the Acropolis, made the city an impregnable fortress that could provide safe refuge for its own population and that of the surrounding rural area in the hour of need. In 662/3 Emperor Constans II wintered in Athens with his army and a large retinue. There also seems to have been a local aristocracy, as suggested by the fact that in the late eighth and early ninth centuries two residents of Athens, Irene and her niece Theophano, ascended the throne of Byzantium.¹¹ As to the aspect of the city, we have very little information. We have to assume, however, that during the seventh and eighth centuries Athens, like other long-established imperial cities,¹² must have shed the last of the characteristics that marked it as a city of late antiquity and have been transformed into the “small and insignificant town” of the Middle Ages.¹³

A period of general reconstruction and administrative reorganization began for Byzantium after the middle of the ninth century and culminated in the centuries that followed. The population began to grow at a regular rate once more, the circulation of money increased, and favorable conditions were created for the revitalization of the urban centers. Against this background, Athens started to recover. Administratively, the city was part of the theme of Hellas formed in the late seventh century with its capital in Thebes. However, it can be deduced from an inscription on one of the columns in the Parthenon and concerning the death of Leo, *strategos* of the theme of Hellas, in August 848, that during the first half of the ninth century Athens may have been the seat of the theme. Other inscriptions on the columns tell us that the bishopric of Athens was elevated to the rank of archbishopric before the middle of the ninth

⁸ Travlos, Πολυοδομική ἐξέλιξις, 149–50.

⁹ Frantz, *Late Antiquity*, 120–22.

¹⁰ P. Charanis, “The Significance of Coins as Evidence for the History of Athens and Corinth in the Seventh and Eighth Centuries,” *Historia* 4 (1955): 163–72; S. Vryonis, “An Attic Hoard of Byzantine Gold Coins (668–741) from the Thomas Whittemore Collection and the Numismatic Evidence for the Urban History of Byzantium,” *ZRVI* 8.1 (1963): 291–300.

¹¹ Gregorovios and Lambros, *Ἱστορία*, 1:154–63, 191–203.

¹² C. Foss, *Ephesus after Antiquity: A Late Antique Byzantine and Turkish City* (Cambridge, 1979), 103–15.

¹³ For the general economic, social, and cultural changes that came about in Byzantine cities during the 7th century, see J. F. Haldon, “Some Considerations on Byzantine Society and Economy in the Seventh Century,” *ByzF* 10 (1985): 75–112; idem, *Byzantium in the Seventh Century: The Transformation of a Culture* (Cambridge, 1990).

century and to that of metropolitan bishopric late in the tenth century.¹⁴ At the same time, the “renowned church of the Mother of God” (περιώνυμος ναὸς τῆς Θεομήτορος), housed in the Parthenon, had begun to attract pilgrims from all over the empire—including Hosios Loukas¹⁵ and St. Nikon “the Metanoëite”¹⁶—while in 1018 Basil II dedicated his victory over the Bulgars to the Virgin of Athens.¹⁷

It is clear from the above that Athens had recovered comparatively quickly. Building activity began again in the late ninth century, as demonstrated by the construction of the church of St. John Mangoutis in 871 and by the earliest structures in the settlement occupying the site of the ancient Agora, which archaeologists have dated to the ninth or tenth century.¹⁸ These structures (since removed) show that even at this time the city had expanded outside the boundary of the late Roman wall. Its population increased, and some of the urban functions were restored.

In the eleventh and twelfth centuries, numerous churches were built in the area between the late Roman wall and the outermost fortifications—a sure indication that the city was prospering. They were founded, of course, by members of the local aristocracy of landowners and state officials, which was very powerful in society and the economy at that time. These churches, some of which can still be seen today (the Holy Apostles in the Agora, Kapnikarea, Sts. Theodore, Hagioi Asomatoi, Gorgoepikoos, and others) are of the cross-in-square type; they are small in size, with richly decorated facades and harmoniously articulated masses crowned by an elegant dome. The Greek-cross octagon type with a large dome is represented by Sotera Lykodemou, then the *katholikon* of a monastery on the outskirts of the town.¹⁹ There are also links between the aristocracy and the monasteries founded around the city in the eleventh and twelfth centuries. The most important of these is Daphni, the classicizing elegance of whose mosaics reveals close links to the art of Constantinople.

At about this time, densely built residential districts came into existence, on a deep layer of landfill, in the ancient Agora, on the lower slopes of the Areopagos, on the south side of the Acropolis, and in the area north of the temple of Olympian Zeus.²⁰ These districts, whose ruins have been removed to allow the investigation of lower strata, were inhabited by the lower and middle classes.²¹ Their houses were simple in

¹⁴ A. K. Orlandos and L. Vranousis, *Τὰ χαράγματα τοῦ Παρθενῶνος* (Athens, 1973), *33–*36, 127–31, 72–73, 50–51.

¹⁵ D. Sophianos, *Ὁ Βίος τοῦ Ὁσίου Λουκᾶ τοῦ Σπειριώτη* (Athens, 1989), 166.

¹⁶ Sp. Lambros, “Ὁ Βίος Νίκωνος τοῦ Μετανοεῖτε,” *Νέος Ἑλλ.* 3 (1906): 155–56.

¹⁷ Gregorovios and Lambros, *Ἱστορία*, 1:228–34.

¹⁸ Travlos, *Πολεοδομικὴ ἐξέλιξις*, 150–54.

¹⁹ For the Byzantine churches of Athens, see G. Sotiriou, A. Xyngopoulos, and A. Orlandos, *Εὐρετήριο τῶν Μεσαιωνικῶν Μνημείων τῆς Ἑλλάδος*, 3 vols. (Athens, 1927–30); A. H. S. Megaw, “The Chronology of Some Middle Byzantine Churches,” *BSA* 32 (1931–32): 90–130; M. Chatzidakis, *Βυζαντινὴ Ἀθήνα* (Athens, 1958); J. Travlos, “Athen,” *RBK* 1:349–89; A. Frantz, *The Church of the Holy Apostles at Athens*, *The Athenian Agora* 20 (Princeton, N.J., 1971).

²⁰ Travlos, *Πολεοδομικὴ ἐξέλιξις*, 154–56.

²¹ Recent excavations in the area north of the ancient Agora do not seem to have altered this picture. See T. L. Shear, Jr., “The Athenian Agora: Excavations of 1981–1982,” *Hesperia* 53 (1984): 5.

form, constructed using shoddy materials, and often stood on the ruins of earlier buildings. There were only a few rooms, arranged around an inner courtyard, and in the basement there would be storerooms with large jars in which agricultural produce could be kept.²² None of the residences of the upper classes have been identified; they may have stood within the area surrounded by the late Roman wall, which continued to be the administrative and economic heart of Athens. The city grew freely, without planning, in a spontaneous, dynamic manner. The old road network—or at least its main arteries—survived, but streets grew narrower and less regular as private houses came to encroach upon their width.²³

A priceless document—a copy of a *praktikon*, dated by its editors to the eleventh or twelfth century, and containing interesting information about the layout and place names of the city²⁴—reveals that Athens was organized into a number of neighborhoods. The *praktikon*, of which only fragments have survived, records the lands and *paroikoi* owned in the city and Attica in general by an ecclesiastical foundation in Athens, possibly a large monastery.²⁵ Athens is not referred to by name, but as “the *kastron*.” Ἐν τῷ κάστρῳ—that is, within the walled city—the *praktikon* records thirteen fields, most of which abut on “the imperial wall” (τὸ βασιλικὸν τεῖχος) and were located among the houses and churches “in the neighborhood of Tzykanitzirion, at the spot called Elaphos, below the Upper Gate, and below the neighborhood of the purple dye makers” (ἐν τῇ γειτονίᾳ τοῦ Τζυκανιτζηρίου, ἐν τῇ τοποθεσίᾳ τῆς Ἐλάφου, ὑπὸ τὴν Ἐπάνω Πόρταν, ὑπὸ τὴν γειτονίαν τῶν Κογχυλαρίων). The Tzykanitzirion quarter²⁶ was in the north of the city, Elaphos was close to the Hill of the Nymphs, and the purple dye makers had the workshops in which they treated the murex between the Acropolis and the Hill of the Muses.²⁷

The same picture of a densely built settlement with a large number of storage jars (*siroi*) in the basements of the dwellings also emerges from recent excavations in Syntagma Square, being conducted on the occasion of the works to install the Athens Metro.

²² For the storage jars, see A. Vavyloupoulou-Charitonidou, “Κεραμικά εὐρήματα βυζαντινῆς καὶ μετα-βυζαντινῆς ἐποχῆς ἀπὸ τὴν ἀνασκαφῇ νοτίως τῆς Ἀκροπόλεως,” *ΑΔ* 37 (1982): Μελέτες, 130–32.

²³ Bouras, “City and Village,” 638–41; Y. Nikolopoulou, Ἀρχαιολογικὰ Ἀνάλεκτα ἐξ Ἀθηνῶν 4 (1971): 8–9.

²⁴ E. Granstrem, I. Medvedev, and D. Papachryssanthou, “Fragment d’un *praktikon* de la région d’Athènes (avant 1204),” *REB* 34 (1976): 5–43.

²⁵ As for place names, we should note the survival of ancient names (e.g., Koele). We also have mention of the names of the local aristocracy, including the family name Spourgitis in an inscription on the *thorakia* of the church of St. John Mangoutis. See K. Konstantopoulos, “Ἐπιγραφὴ Ἀγίου Ἰωάννη Μαγκούτη,” *ΕΕΒΣ* 8 (1931): 253.

²⁶ This district was obviously located close to the *tzykanisterion*, the ground where the form of mounted exercise called *tzykanion* (a form of polo) was practiced and from which it took its name. Granstrem, Medvedev, and Papachryssanthou, “Fragment,” 26–27. There were similar grounds in Sparta, Ephesos, and Constantinople; their existence is associated with the urban aristocracy and can be taken as an indication of properly organized urban life. See M. Angold, “The Shaping of the Medieval Byzantine ‘City,’” *ByzF* 10 (1985): 17.

²⁷ The evidence for locating the district of the makers of purple dye here consists of the stratum of shells found by an early excavation southwest of the Acropolis, near the Odeion of Herodes Atticus; Granstrem, Medvedev, and Papachryssanthou, “Fragment,” 27–28. Michael Choniates refers, in a letter from Kea, to Athenian participation in fishing for the murex shells from which purple dye was

The “imperial wall” is, of course, the outer city wall,²⁸ and the “Upper Gate” must have been the Dipylon, by which the ancient Agora was entered. This area was covered by trees, among which there were “ancient buildings and holy churches.”

The “fields” recorded within the imperial wall were among the largest referred to by the *praktikon*, with a total area of 20,816 square *orgyiai*, and they must have been used for growing grain.²⁹ The presence of such large stretches of arable land within the city boundaries is a reminder of the primarily agricultural nature of Athens. As was also the case in other middle Byzantine cities, the people of Athens—the large landowners as well as the middle and lower classes—were closely bound up with cultivation of the land. Agricultural products such as oil from the olive grove of Attica, the famous honey of Mount Hymettos, wax, resinated (ἔχπευκῆς) wine, and some animal products occupied an important position in the system of production. These products must have been consumed on the local level, and indeed sometimes were not available in quantities sufficient to meet the needs of the population.³⁰

In parallel, of course, the inhabitants of Athens developed some commercial and manufacturing activities. The center for these activities has not been identified. It is probable that the commercial and manufacturing establishments were located along the main streets of the city, among the houses, as was the case at Corinth.³¹ Excavations have yielded pottery kilns for the making of everyday vessels in the settlement that stood in the Roman Market³² and in that on the Areopagos,³³ together with workshops on the outskirts of the city: soapworks in the Kerameikos, tanneries in the vicinity of the temple of Olympian Zeus.³⁴ Athens also made purple dye from murex shells; this was a substance of great value in the dyeing of silk cloth, and, as noted, the workshops of the purple dye makers were southwest of the Acropolis. The dye was sold to nearby

produced: “many ship owners cross to us, in murex-fishing ferries, from Chalkis [and Carystos] and from Athens” (πλωτικοὶ πολλοῖς κογχυλεντικοῖς πορθμείοις διαπεραιοῦνται πρὸς ἡμᾶς ἐκ τε Χαλκίδος [καὶ Καρυστόθεν] καὶ Ἀθήνηθεν). See Sp. Lambros, *Μιχαὴλ Ἀκομινάτου τοῦ Χωνιάτου Τὰ Σφωζόμενα* (Athens, 1880), 2:275.

²⁸ This wall was not, of course, used for defensive purposes, but, as can be deduced from the document, marked the extremity of the city.

²⁹ If the square *orgyia* is taken as equal to 4.44 or 4.70 m² (E. Schilbach, *Byzantinische Metrologie* [Munich, 1970], 72–73), then the area of these fields amounts to 92,432 or 97,835 m². The total area enclosed by the Wall of Themistocles has been calculated (Travlos, *Πολεοδομικὴ ἐξέλιξις*, 71) as 2,150,000 m². This must be taken to have been the area of middle Byzantine Athens, since the classical wall was still being used as the city boundary. The fields recorded represent approximately one-twentieth of the total area of the city, a strikingly high proportion. The other pieces of land recorded in the villages of Attica (fields, vineyards, olive groves) have a total area of 29,095 square *orgyiai* if we exclude Eleusis, the only large stretch of ground recorded by the *praktikon* (640,000 square *orgyiai*). I think it is clear that we are dealing with the property of a large monastery that was not far from the city. See Granstem, Medvedev, and Papachryssanthou, “Fragment,” 7–8, 10–15.

³⁰ Lambros, *Αἱ Ἀθήναι*, 28.

³¹ Bouras, “City and Village,” 648; R. L. Scranton, *Mediaeval Architecture in the Central Area of Corinth*, Corinth 16 (Princeton, N.J., 1957), 57–60, 77–78, 83, 123–25, 133–36.

³² F. Stavropoulos, *ΑΔ 13* (1930–31): app., 5–6.

³³ Travlos, *Πολεοδομικὴ ἐξέλιξις*, 154 n. 1.

³⁴ Bouras, “City and Village,” 627.

Thebes, where there was a flourishing silk industry after the mid-eleventh century,³⁵ as was the soap with which the silk was cleaned. It would also seem that a limited amount of trade was carried on, since Athens was among the ports in which the emperors granted the Venetians commercial privileges during the twelfth century.³⁶

Down to the middle of the twelfth century, Athens gives the impression of a flourishing city. In 1182, however, when Michael Choniates settled there as metropolitan bishop (1182–1204), the situation had changed. In his addresses and letters, that clergyman-scholar described a small, impoverished town that had lost not only all its ancient brilliance “but also the very shape of a city and the form and state that define cities” (αὐτὸ τὸ τῆς πόλεως σχῆμα καὶ τὴν ὅλως ἐγγράφουσιν ταῖς πόλεσι μορφήν καὶ κατάστασιν). Athens suffered from the willfulness and rapacity in tax collecting of Byzantine officials, was oppressed by “an oligarchy bent on enriching itself” (τῆς τῶν πλουτούντων ὀλιγαρχίας), and was bedeviled by famine and the raids of Saracens, which compelled the poorer inhabitants of the town to move elsewhere. The walls were broken down, the streets were deserted, and the houses had been demolished, their sites reverting to farmland.³⁷ The description given by Choniates, who admired and was nostalgic for the city’s glorious past, certainly contains some degree of exaggeration, but it would seem that—for reasons that are not sufficiently clear—Athens had indeed gone into decline in the late twelfth century.

In 1204 the lower city was destroyed by Leo Sgouros, ruler of Nauplion, and at the end of the same year Choniates handed Athens over to the Franks. Over the next 250 years, it was ruled, successively, by the French dukes de la Roche and de Brienne (1204–1311), the Catalans (1311–87), and the Acciajuoli family of Florence (1387–1456). After the relative peace of government by the French princes came the brutality of the Catalans, when the Athenians declined into “the ultimate slavery” (τὴν ἐσχάτην δουλείαν) and “exchanged their former felicity for boorishness” (τῆς παλαιᾶς εὐδαιμονίας τὴν ἀγροικίαν ἠλλάξαντο). Under the Florentine dukes, social and economic conditions improved, and the seat of the duchy moved from Thebes to Athens.³⁸

Among the first concerns of the French dukes was to strengthen the defenses of the Acropolis—of the Castel de Setines, as Athens was now called. In the first half of the thirteenth century, a fortified precinct was constructed at the foot of the Acropolis—Rizokastro, that is³⁹—and toward the middle of the century the fortifications of the Acropolis were improved and the Sacred Rock became a medieval citadel. A strong wall (*proteichisma*) was built across its main entrance, the Klepsydra spring was walled off, and a high watchtower now rose on the south wing of the Propylaia. Much impor-

³⁵ D. Jacoby, “Silk in Western Byzantium,” *BZ* 84/85 (1991–92): 481.

³⁶ Lambros, *Αἱ Ἀθήναι*, 29–30.

³⁷ Lambros, *Αἱ Ἀθήναι*, 27–34, 51–54, 67–75; Setton, *Athens in the Twelfth Century*, 187–98.

³⁸ For the history of Athens under the Franks, see Gregorovios and Lambros, *Ἱστορία*, 1:345ff; and vol. 2; K. M. Setton, *Catalan Domination of Athens* (Cambridge, Mass., 1948; rev. ed., London, 1975); idem, *Athens in the Middle Ages* (London, 1975), with a full bibliography.

³⁹ E. Makri, K. Tsakos, and A. Vavlopoulou-Charitonidou, “Τό Ριζόκαστρο. Σωζόμενα ὑπολείμματα: νέες παρατηρήσεις καὶ ἐπαναχρονολόγηση,” *Δελτ.Χρυστ. Ἀρχ. Ἑτ.* 14 (1987–88): 329–66.

tant building work was also done under the Florentine dukes. Duke Nerio I (1387–95) converted the Propylaia into a Florentine palace, embellished the Parthenon, and repaired churches in the town. Throughout the period of Frankish rule, the city was confined within the late Roman wall, and the area beyond that fortification became a wasteland.⁴⁰ The Italian notary Nicolò da Martoni, who visited Athens in 1395, describes it as a small town of some one thousand houses.⁴¹

During the seven centuries of the Middle Ages, the city of late antiquity underwent lengthy processes and realignments on the social, economic, and cultural levels that transformed it into the “tripartite city” (τρίπλοκον ἄστυ) of the middle Byzantine period and, later, into the medieval citadel of Frankish times. In 1456, when the last Florentine duke surrendered Athens to the Turks, a new period in the long history of the city began.

⁴⁰ Travlos, *Πολεοδομικὴ ἐξέλιξις*, 163–72. For the layout of the Propylaia, see T. Tanoulas, *Τὰ Προπύλαια τῆς ἀθηναϊκῆς Ἀκρόπολης κατὰ τὸν Μεσαίωνα* (Athens, 1997), 323ff, drawings 63–73.

⁴¹ J. M. Patton, *Chapters on Medieval and Renaissance Visitors to Greek Lands* (Princeton, N.J., 1951), 32.

Corinth

G. D. R. Sanders

The archaeology of medieval Corinth has been discussed in some depth by Charles Morgan and Robert Scranton in their respective *Corinth* volumes; together these influential publications have formed a foundation for all secondary literature. Current interpretation of new archaeological material, however, and reinterpretation of old make it clear that Morgan and Scranton must be used with discretion. Their work too is being reappraised in the light of recent architectural, stratigraphic, sigillographic, numismatic, and ceramic studies.¹

Any overview of the site of Corinth should start by recognizing that only a comparatively small portion of the medieval city has been excavated to date: the area in and immediately around the Roman forum, the Bath on the Lechaium Road, the theater, and trial trenches on Acrocorinth and in the modern village. It has always been assumed that the forum survived as the medieval city center. Since the medieval structures in the forum area are late and of a religious, domestic, or industrial, and not civic, nature, this view is difficult to support. The forum area seems rather to have been a poor suburb and cannot be considered representative of Corinth as a whole.

The decline of late Roman Corinth began when the city was damaged by earthquakes in 365 and 375 and burned by the Goths in 395/396. Thereafter the central shops of the forum were leveled and replaced by a long, low staircase flanking the

¹ R. L. Scranton, *Mediaeval Architecture in the Central Area of Corinth, Corinth XVI* (Princeton, N.J., 1957); C. H. Morgan, *The Byzantine Pottery, Corinth XI* (Cambridge, Mass., 1942). For recent examples of the secondary literature using these sources, see Ch. Bouras, "City and Village: Urban Design and Architecture," *JÖB* 31.1 (1981): 617–19; A. Harvey, *Economic Expansion in the Byzantine Empire, 900–1200* (Cambridge, 1989), 214–15. For recent work, see especially the excavation reports of C. K. Williams II with the numismatic appendices by O. Zervos in *Hesperia*. In these, Williams has been systematically updating the Frankish archaeology of Corinth on the basis of his work on the complex south of the museum. This follows Frankish pottery studies by T. S. MacKay ("More Byzantine and Frankish Pottery from Corinth," *Hesperia* 36 [1967]: 249–320) and G. D. R. Sanders ("An Assemblage of Frankish Pottery at Corinth," *Hesperia* 56 [1987]: 159–95), and will be followed by books on the Byzantine and Frankish pottery by Sanders and Williams. A. Dunn is preparing the lead seals for publication, and new studies on the medieval coins are being conducted by O. Zervos and J. D. Mac-Isaac.

Bema, the propylaea and west shops were refurbished, and a new city wall, enclosing an area of only 1.5 km², was erected in the first quarter of the fifth century.² In the fifth and sixth centuries, large Christian basilicas and associated cemeteries were located outside the new wall.³ The great plague of 542 may have cut the population by half. It was preceded by a devastating earthquake centered close to the city and succeeded by a series of earthquakes in the general area of central Greece in 551/552.⁴ Slavic colonization of the Peloponnese later in the sixth and seventh centuries resulted in the resettlement of at least some of the Corinthian population on Aegina.⁵

By the mid-sixth century the city center had shed its original functions; the administration and much of the population relocated, perhaps focusing on a new, much restricted center or even near some or one of the extramural basilicas. Belt buckles and coins indicate that the Kraneion and Kodratus basilicas, a possible mortuary chapel in the Asklepieion, and a small church on Acrocorinth continued to be used well into the seventh century.⁶ The almost complete abandonment of the forum area for civic and commercial purposes is demonstrated by its use for burial from the late sixth century,⁷ indicating that either the prohibition of burial within cities (CIC, *Dig* 47.12.3, no. 5) had lapsed, or yet another city wall, which excluded the forum area from its enceinte, had been constructed. There is unpublished evidence for such a *kastron* (undated) im-

² Scranton, *Mediaeval Architecture*, 5, 9–26; C. K. Williams and J. E. Fisher, “Corinth, 1975: Forum Southwest,” *Hesperia* 45 (1976): 63; T. E. Gregory, “The Late Roman Fortification Wall at Corinth,” *Hesperia* 48 (1979): 292–72.

³ Lerna Hollow: Scranton, *Mediaeval Architecture*, 7; Lechaëum: D. I. Pallas, “Ανασκαφικά ἔρευναι ἐν Λεχαίῳ,” Πρακτικά (1965 [1967]): 157–62; Kenchrean Gate: J. M. Shelley, “The Christian Basilica near the Cenchrean Gate at Corinth,” *Hesperia* 12 (1943): 166–89; D. I. Pallas, “Ανασκαφή τῆς βασιλικῆς τοῦ Κρανείου ἐν Κορίνθῳ,” Πρακτικά (1977 [1980]): 162–83; Skoutela: idem, “Ανασκαφή τῆς βασιλικῆς τῆς Σκουτέλας ἐν Κορίνθῳ,” Πρακτικά (1955 [1960]): 193–200; Kodratus: E. G. Stikas, “Κοιμητηριακὴ βασιλικὴ Παλαιᾶς Κορίνθου,” Πρακτικά (1961 [1964]): 129–36; idem, “Ανασκαφὴ κοιμητηριακῆς βασιλικῆς Παλαιᾶς Κορίνθου,” Πρακτικά (1962 [1966]): 51–56; Asklepieion: C. Roebuck, *The Asklepieion and Lerna, Corinth XIV* (Princeton, N.J., 1951), 160–71; and J. Wiseman, “Excavations in Corinth: The Gymnasium Area, 1967–1968,” *Hesperia* 38 (1969): 64–106.

⁴ Prokopios, *Anecdota*, 18.41–43, trans. H. B. Dewing, vol. 6 (Cambridge, Mass., 1960); Prokopios, *De bello gothico*, 2.22–23 and 8.25.16–25, trans. H. B. Dewing, vols. 3–5 (Cambridge, Mass., 1953–60).

⁵ *Cronaca di Monemvasia*, ed. I. Dujčev (Palermo, 1976), lines 86–144.

⁶ G. R. Davidson, *The Minor Objects, Corinth XII* (Princeton, N.J., 1952), 267; D. I. Pallas, “Données nouvelles sur quelques boucles et fibules considérées comme avars et slaves et sur la Corinthe entre le VI^e et le IX^e s.,” *BBulg* 7 (1981): 298 n. 18; Stikas, “Κοιμητηριακὴ βασιλικὴ Παλαιᾶς Κορίνθου,” 56; Roebuck, *Asklepieion and Lerna*, 169; C. Blegen et al., *Acrocorinth: Excavations in 1926, Corinth III.1* (Cambridge, Mass., 1930), 21, 61–66.

⁷ Davidson, *Minor Objects*, nos. 2192–96; G. R. Davidson, “The Avar Invasion of Corinth,” *Hesperia* 6 (1937): 232, fig. 3; C. K. Williams, J. MacIntosh, and J. E. Fisher, “Excavation at Corinth, 1973,” *Hesperia* 43 (1974): no. 8; C. K. Williams and J. E. Fisher, “Corinth, 1975: Forum Southwest,” *Hesperia* 45 (1976): no. 2, pl. 57a; H. S. Robinson, “Excavations at Corinth: Temple Hill, 1968–1972,” *Hesperia* 45 (1976): 222; also Corinth inv. nos. MF 486, MF 4996, MF 7937, and C-72-192. These can now be dated with confidence. See A. I. Aibabin, “Problemy khronologii mogil’nikov Krima pozdnerimskogo perioda,” *SovArh* (1984.1): 104–22; A. K. Ambroz, “Problemy rannesrednevekovoi khronologii vos-tochnoi Evropy,” *SovArh* (1971.2): 96–123; idem, “Problemy rannesrednevekovoi khronologii vos-tochnoi Evropy,” *SovArh* (1971.3): 106–32.

Table 1
Coin Finds 565–959

Justin II (565–578)	279	Theodosios III (715–717)	—
Tiberios II (578–582)	42	Leo III (717–741)	2
Maurice (582–602)	55	Constantine V (741–775)	7
Phokas (602–610)	70	Leo IV (775–780)	4
Herakleios (610–641)	36(7)	Constantine VI (780–802)	1
Constantine III (641)	—	Nikephoros I (802–811)	2
Heraklonas (641–642)	—	Staurakios (811)	—
Constans II (642–668)	96(23)	Michael I (811–813)	3
Constantine IV (668–685)	4	Leo V (813–820)	10
Justinian II (685–695)	2	Michael II (820–829)	6
Leontios (695–698)	—	Theophilos (829–842)	161
Tiberios III (698–705)	1	Michael III (842–867)	18
Justinian II (705–711)	?	Basil I (867–886)	278
Philippikos (711–713)	—	Leo VI (886–912)	972
Anastasios II (713–715)	—	Constantine VII (913–959)	2,285

Source: This list was assembled from the card index at Corinth to which were added details from K. M. Edwards, *Coins, Corinth VI* (Cambridge, Mass., 1933) 125–26, 165; K. M. Edwards, “Report on the Coins Found in the Excavations at Corinth during the Years 1930–1935,” *Hesperia* 6 (1937): 241–56; J. H. Harris, “Coins Found at Corinth, 1936–1939,” *Hesperia* 10 (1941): 143–62; J. D. MacIsaac, “Corinth: Coins, 1925–1926. The Theatre District and the Roman Villa,” *Hesperia* 56 (1987): 97–156. Details were also included from the appendices of the annual excavation reports in *Hesperia*. Figures in brackets refer to coins from Acrocorinth; see A. R. Bellinger, *Catalogue of the Coins Found at Corinth, 1925* (New Haven, Conn.–Oxford (1930), 66.

mediately to the east of the forum.⁸ Remarkably little pottery and an insignificant number of coins of the seventh to ninth centuries have been found within the excavated area of the Roman forum (Table 1), but several Corinth Type belt buckles in graves attest to the area’s continued use for burial well into the eighth century.⁹

Reassimilation of the Peloponnese into the empire in the late eighth century is not reflected in the archaeological record of the excavated portion of medieval Corinth. Central within the communications network and of great strategic importance, Corinth remained the thematic capital of the region until the eleventh century.¹⁰ This status as

⁸ Scranton, *Mediaeval Architecture*, 29–30, may describe the west side of the *kastron*. A fortification wall and tower, standing about 4 m high, was observed by the author in a trench excavated by the Greek Archaeological Service south of Tasso’s Hotel in the mid-1980s.

⁹ See note 7.

¹⁰ G. D. R. Sanders and I. K. Whitbread, “Central Places and Major Roads in the Peloponnese,” *BSA* 85 (1990): 348–49, fig. 3.3; A. Bon, *Le Péloponnèse byzantin jusqu’en 1204* (Paris, 1951), 186–207.

the seat of local government made the city the residence of several government officials, including the *strategos* and his civil and military staff. Collection of taxes, initially in kind, presumably required centralized but hitherto unlocated *apothekai* in or near Corinth.¹¹ Finally, as the seat of an archbishop and his retinue, Corinth must have had a metropolitan church of some size. Presumably these civil and religious administrators had accommodation and possessions commensurate with their rank, but no archaeological finds yet attest the presence of social orders higher than artisan, merchant, burgher, or monk. Comparison with the extant and historically attested remains of an altogether lesser city, Athens, strongly suggests that the excavated portion of Corinth is a poor suburb and that the commercial, administrative, and ecclesiastic center was located elsewhere.

The archaeological record at Corinth indicates that the local remonetization of the Corinthian economy started tentatively in the reign of Leo V, accelerated under Theophilos, and, after a brief decline in the mid-ninth century, expanded radically during the reign of Leo VI. In this context, given the sheer volume of coins in the area, it is possible to hypothesize that the forum was used for commercial purposes. The paucity of ninth- to early eleventh-century structures therein suggests that the open area may have operated as the site of an *emporopaneyreis*.¹² This would have been attended by merchants or their agents; indeed, in the late eleventh century Corinth was a center at which the Venetians gathered regional products, especially oil and silks, and between 1165 and 1171 Vitale Voltani, an agent of Romano Mairano, almost monopolized the Venetian share of the oil market of Corinth.¹³

Ceramic finds suggest that Aegean and Adriatic commercial contacts with Corinth were curtailed by the war fleets of Arab colonists in Crete and southern Italy. Nevertheless, essential diplomatic and personal missions continued to be made via the Isthmus, for instance, the representatives sent by Basil I to the pope and Louis II.¹⁴ There is no reason to doubt the assertion of Nuwayri, a fourteenth-century Egyptian chronicler, that the incursions of the Cretan Arabs into the Aegean in the ninth and tenth centuries effectively brought Byzantine trade to a standstill.¹⁵ Some Italian influence can be seen in the locally produced pottery in the late ninth century, in other words, after the reopening of the Adriatic. Furthermore, imports of pottery from Constantinople only resumed after the recapture of Crete in 960–961.

¹¹ The function of the *apothekai* is debatable, and no such structures have been located anywhere. See, on the *apothekai*, below and above, 706 n. 44, 985–87.

¹² A. I. Lambropoulou, “Οι πανηγύρεις στην Πελοπόννησο κατά τη μεσαιωνική εποχή,” in *Η καθημερινή ζωή στο Βυζάντιο* (Athens, 1989), 300–303.

¹³ F. Thiriet, *La Romanie vénitienne au moyen âge: Le développement et l'exploitation du domaine colonial vénitien, XIIIe–XVe siècles* (Paris, 1959), 39, 47–48.

¹⁴ P. Grierson, “The Carolingian Empire in the Eyes of Byzantium,” in *Nascità dell'Europa ed Europa Carolingia: Un'equazione da verificare* (Split, 1981), 913–14.

¹⁵ V. Christides, *Conquest of Crete by the Arabs (c. 824): A Turning Point in the Struggle between Byzantium and Islam* (Athens, 1984), 167. For historical evidence for the existence of trade during that period, see A. E. Laiou, “Exchange and Trade, Seventh–Twelfth Centuries,” *EHB* 713ff.

In the last decade of the eleventh century the material culture of the city underwent a revolution best demonstrated by the appearance, quantity, and quality of pottery. Earlier communal shapes such as glazed chafing dishes were replaced by individual glazed bowls and dishes. At the same time, the glaze, formerly used functionally, became standard as part of the decoration of tablewares, in conjunction with a white slip and incised or painted lines. The proportion of glazed wares in pottery assemblages also increased from less than 1% to about 6% of the whole. This revolution suggests a change in eating habits and the general adoption of premium ceramic products that once had been the preserve of richer citizens. The phenomenon extended to lesser provincial cities and rural settlements only about twenty years later. The change perhaps resulted from large-scale manufacture, efficient distribution networks, and the fact that poorer people now had some spare cash to spend. A gradual reduction in the size and value of gold, silver, and, most significantly, copper coins to about one-third of their former value over the course of the mid-eleventh century resulted in a bronze coin of low denomination that could be used as money for petty market and shop transactions. Various economic measures taken in the reign of Alexios I may have further stimulated the evolution of part-time to full-time craft specialization in Corinth, thereby providing a dependent urban market for the agricultural produce of the rural hinterland.¹⁶

The strength of Corinth's economy in the mid-twelfth century led to a piratical attack by the fleet of Roger of Sicily in 1147. Notwithstanding the losses in skilled labor, Roger's court geographer, Edrisi, was still able to describe the city as "large and flourishing" seven years later in 1154.¹⁷ In the late twelfth century, Choniates records that the city had two harbors and that the *emporion*, prosperous from trade, was below the *kastron* (usually assumed to be Acrocorinth).¹⁸ The fact that the Franks found the lower town fortified with towers and a circuit wall in the early thirteenth century is seldom reported.¹⁹ This fortification is perhaps essentially the same as that noted to the east of the forum and may well be that alluded to by Choniates. The change in administration seems not to have affected commerce, and, although Corinth was no longer the seat of regional government, it remained in the hands of the prince of the Morea and acted as an important center for international trade. The appearance of material culture remained essentially unchanged, and the lack of a local Frankish coinage in the early thirteenth century was mitigated by the circulation of the Latin Imitatives and

¹⁶ G. D. R. Sanders, "Byzantine Glazed Pottery at Corinth to c. 1125: Chronological, Social and Economic Conclusions" (Ph.D. diss., University of Birmingham, 1995). The weight of the copper follis declined to 40% of its former size but, despite fluctuations, the ratio of copper to gold remained constant. Alexios I further reduced the size of the copper coinage. *Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig*, ed. G. F. L. Tafel and G. M. Thomas, 3 vols. (Vienna, 1856–57), 1:51ff, 96.

¹⁷ *La géographie d'Edrisi*, ed. J. A. Jaubert, 2 vols. (Paris, 1936–40), 122–26; Bon, *Péloponnèse byzantine*, 156–58.

¹⁸ *Nicetae Choniatae Historia*, ed. J. L. van Dieten (Berlin–New York, 1975), 74.

¹⁹ *The Chronicle of the Morea*, ed. J. Schmidt (London, 1904), 74–75; Bouras, "City and Village," 618.

perhaps by the continued use of Manuelan types. The suzerainty of Charles II of Anjou over the Peloponnese strengthened the existing commercial ties with Italy to the extent that a significant proportion of manufactured articles, especially pottery from Apulia and the Veneto, was imported into Corinth.²⁰ The near extinction of Corinth in the fourteenth century can largely be attributed to the Catalan sack in 1312, which was followed by an earthquake ca. 1320 and by the arrival of the Black Death in 1348.

Almost none of the extensive domestic, workshop, and shop quarter in the forum area existed before the very end of the eleventh century. Expansion in the area originally followed the then still extant line of the Roman *decumanus*, running west along the south side of the South Stoa, from the proposed *kastron*. This was followed by development into the Roman forum, where the open space was rapidly and drastically reduced by encroaching constructions. The maximum extent in the thirteenth century is that represented in the plans illustrated in *Corinth XI* and *Corinth XVI* for the period of the eleventh and twelfth century respectively. This area was excavated sixty years ago, and there is regrettably little that can now be done to elucidate the function of the complexes found there. It is clear from the accumulation of 1.50–2.00 m of occupation deposits between ca. 1050 and 1250 and numerous, now obscure, building phases that activity was intense and civic hygiene somewhat squalid. Some of the narrow (2.5–5 m wide) alleys and part of the central plateia were lined with small, one- to (exceptionally) four-celled shops. Each cell offered no more than 12–15m² of retail and storage space; these operations, therefore, necessarily had to be small-scale. Some shops opened onto a stoa-like covered frontage.

Behind the shops, domestic and monastic complexes centered on courtyards. The domestic, and plausibly the monastic, areas were also used for craft specialization. A potters' kiln dating ca. 1100–50 predates the construction of St. John's monastery in the early thirteenth century.²¹ The identification of the "Pottery Factory" and the function of several other kilns in the area is questionable, but early twelfth-century preglazing pottery wasters, metal slag and glass furnace lining, cullet and pontil wads found south and westward from the Bema church are evidence for industry. Much of the glass from the Glass Factory itself is now considered to be late thirteenth to early fourteenth century in date. In appearance the glass of this late date has close parallels with western types, and further research is required to ascertain whether it is locally produced or imported.²² A small medieval bathhouse is still preserved southwest of the Bema, and to the east were found remains of winepresses and olive presses. There are also well-known references to silk workers and dyers, while the westernized form of

²⁰ C. K. Williams and O. Zervos, "Frankish Corinth, 1992," *Hesperia* 62 (1993): 20–21, 31; Sanders, "Assemblage of Frankish Pottery," 193. Between 30% and 60% of the glazed pottery from the complex south of the museum at Corinth was Italian in origin.

²¹ C. K. Williams and O. Zervos, "Frankish Corinth, 1991," *Hesperia* 61 (1992): 164–71, for a recent discussion of St. John's.

²² Williams in C. K. Williams and O. Zervos, "Frankish Corinth, 1992," 15–33; Cf. V. François and J.-M. Spieser, "Pottery and Glass in Byzantium," *EHB* 597.

the city's name, Coranto, gave rise to the name of a variety of locally produced small, dried, seedless grapes: currants.

More recent excavations have uncovered an eleventh- to early twelfth-century establishment that perhaps engaged in gold and bronzework at the southwest end of the forum. There is, however, no evidence to support the interpretation of one of the larger structures to the north of the smith's shop as a silk-workers' lodge. Here a row of four shops fronting the street running south toward Acrocorinth was built in the mid-twelfth century. These were each linked by doors in their back wall to a long communal hall running the length of their west side; an earlier bath structure may have remained in use. The whole complex centered on an open courtyard limited on the west side by the West Shops. The second floor of the shops, supported by pilasters and the colonnade of archaic columns (originally the interior colonnade of the temple of Apollo) overhung the street.²³

South of the museum, and immediately west of the above area, current work has concentrated on a small monastery north of a later thirteenth- to early fourteenth-century complex based around two courtyards. A line of shops including a pharmacy, identified by the finds of imported and local *albarelli* (drug jars), a possible bank, associated with several jetons and counterfeit coins, a tavern, with a hearth and windowsill-cum-counter, and a metal workshop separate the large graveled eastern court from a smaller, paved western court. Glass, ceramic, and metal objects found throughout the area show strong links with Italy. A large kitchen on the inner courtyard, the medical, catering, and financial facilities, and the location on the western approach to the city all suggest that the complex was a hospice perhaps associated with the monastery.²⁴

Practically no information exists to indicate the population of Byzantine towns, and the formulas used by various scholars to estimate numbers vary. It is safe to assume that Peloponnesian towns were small even in their heyday. In 1395 Niccolo Martoni described a much reduced Corinth of about forty-five to fifty houses confined to the enceinte on Acrocorinth. Of the deserted lower town he writes, "as the ruins show, it was (once) a large and important place," though he mistakenly confuses these as ancient rather than recent ruins.²⁵ Estimates of the number of households in the early nineteenth-century settlements of the Peloponnese, provided by Leake and Pouqueville, are informative. These suggest that there was a distinct hierarchy of towns in the Peloponnese, with the largest cities containing a population of about 11,000 (2,500 houses or families) and the lower-ranking towns 5,000 (1,100), 2,500 (560), and about

²³ H. S. Robinson, "Excavations at Corinth, 1960," *Hesperia* 31 (1962): 95–113; C. K. Williams, "Corinth, 1976: Forum Southwest," *Hesperia* 46 (1977): 1–39.

²⁴ C. K. Williams and O. Zervos, "Excavations at Corinth, 1989: The Temenos of Temple E," *Hesperia* 59 (1990): 345–50; eadem, "Corinth, 1990: Southeast Corner of Temenos E," *Hesperia* 60 (1991): 19–39; eadem, "Frankish Corinth, 1991," *Hesperia* 61 (1992): 134–51; eadem, "Frankish Corinth, 1992," *Hesperia* 62 (1993): 3–34; eadem, "Frankish Corinth, 1993," *Hesperia* 63 (1994): 1–56.

²⁵ J. P. A. van der Vin, *Travellers to Greece and Constantinople: Ancient Monuments and Old Traditions in Medieval Travellers' Tales*, 2 vols. (Istanbul, 1980), 615–20.

1,400 (310) respectively.²⁶ It is also safe to assume that settlements grew relatively quickly during the period under examination. A rough estimate of Corinth's population, based on these figures, is that the city may have grown from about 2,000–3,000 in the early ninth century to a peak of perhaps 15,000–20,000 in the twelfth century. Much of this growth seems to have taken place in the later eleventh and early twelfth centuries.

²⁶ Sanders and Whitbread, "Central Places and Major Roads," 352.

Numismatic Circulation in Corinth from 976 to 1204

Vasso Penna

The characterization of Corinth as a “Pompeii” for the study of coin circulation during the Byzantine period is no exaggeration.¹ The long-term excavations by the American School of Classical Studies have brought to light some thousands of Byzantine coins, the study of which constitutes a reliable aid to investigating not only the city’s economic status but also trends in Byzantine monetary circulation in a region distant from Constantinople.²

The main feature of coin circulation in the city in the period from 970 to 1092 is the regularity of the upward trend, which had been gradually formed since the second quarter of the ninth century. In the excavation seasons 1896–1929, the numismatic material of which is published in adequate detail, 816 coins covering the period from 830 to 970 were found, whereas from the phase that concerns us here 2,180 coins are recorded; there is thus almost a threefold increase in the number of coins lost annually (Fig. 1). This upward trend is particularly important for Corinth when one recalls that the period is characterized by widespread recovery in the circulation of bronze coinage in the Peloponnese, presumably implying a redistribution of the productive forces, the transit centers, and the travel routes.³ This redistribution does not seem to have negatively affected the prosperity of Corinth.

The rate of annual loss of the anonymous class A (970–1030/35) is proportionately

¹ D. M. Metcalf, “Corinth in the Ninth Century: The Numismatic Evidence,” *Hesperia* 42 (1973): 181.

² The present study is based on the material from Corinth published to date. K. M. Edwards, “Byzantine Coins,” in *Coins, 1896–1929, Corinth VI* (Cambridge, Mass., 1933), 138–47. K. M. Edwards, “Report on the Coins Found in the Excavations at Corinth during the Years 1930–1935,” *Hesperia* 6 (1937), 250, 255; J. Harris, “Coins Found at Corinth, 1936–1939,” *Hesperia* 10 (1941): 146, 153, and fig. 1. For the excavation periods from 1970 onward, see the relevant reports in the following volumes of *Hesperia*: 40 (1971): 47–50; 41 (1972): 184; 42 (1973): 44; 43 (1974): 75–76; 44 (1975): 48–50; 45 (1976): 160–61; 49 (1980): 27–28; 51 (1982): 159; 52 (1983): 43–44; 53 (1984): 119–20, 246–49; 54 (1985): 94–95; 55 (1986): 173–74, 200–202; 56 (1987): 42–43, 138–48; 57 (1988): 140–41; 58 (1989): 46–47; 59 (1990): 364–65; 60 (1991): 49–50; 61 (1992): 184–85; 62 (1993): 43–44; 63 (1994): 48–49; 64 (1995): 49–51.

³ D. M. Metcalf, *Coinage in South-Eastern Europe, 820–1396* (London, 1979), 71–73.

much smaller than of the other bronze issues of the period (1030/35–1092; Fig. 2). It has been noted, on the basis of the evidence of stray finds as well as of hoards, that the coins circulating in Corinth were mainly certain of the fifty or so varieties of Class A. In the past this has been interpreted as indicative of the existence of a local mint responsible for these issues,⁴ but recent research, based on the geographical distribution of these varieties, has shown this suggestion to be rather improbable. On the contrary, it has been proposed that the specific varieties found at Corinth represent the earliest issues of this class.⁵ This of course implies that the anomaly in the monetary activities of Corinth in the first quarter of the eleventh century was due to certain unexpected circumstances that arose at a particular moment. The historical events of the period, in which the Byzantine-Bulgar wars in the Balkans played a leading role, presumably had a negative influence on the pace of commercial activity in the city and possibly on its monetary support by the central authority.⁶

Another interesting peculiarity in the coin circulation in Corinth is the absence, both in hoards and in stray finds, of gold issues, *histamena* or *tetartera*, as well as of silver *miliaresia*.⁷ The only exceptions are an *hyperpyron* of Constantine X,⁸ a *miliaresion* of Michael VII,⁹ and the small hoard of five *miliaresia* of Basil II, covering the period 989–1035 and found at the port of Kenchreai.¹⁰ Given that our information on the circulation of *miliaresia* within the boundaries of the Byzantine Empire is limited, the find constitutes an interesting case. The circumstances of its concealment are difficult to determine, but whether it is the lost purse of a foreign traveler or the profit from a specific commercial transaction, it is undoubtedly an important testimony of activities in the harbor of Kenchreai.

The year 1092 is a turning point in the history of Byzantine coinage. The monetary reform of Alexios I placed the Byzantine monetary system on a new base, adapting it to the demands of the age.¹¹ The number of published coins of this period from Corinth is

⁴ D. M. Metcalf, "Interpretation of the Byzantine 'Rex Regnantium' Folles of Class A, c. 970–1030," *NC* (1970): 199–219.

⁵ V. Athanassopoulou-Pennas, "Byzantine Monetary Affairs during the 8th, 9th, 10th, 11th Centuries" (D. Phil., Oxford University, 1990), c. 881, 3–4, 231–47; see also V. Ivanisevic, "Interpretation and Dating of the Folles of Basil II and Constantine VII: The Class A2," *ZRV* 27–28 (1989): 19–42.

⁶ The statistical tables for Athens present a similar picture. Moreover, of a total of 297 coins of this period from excavations at Sparta, Class A is represented by 89 pieces, i.e., 30%.

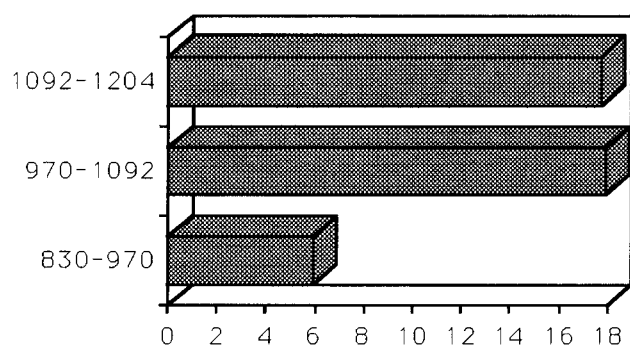
⁷ The lack of *histamena* and gold *tetartera* from Corinth is consistent with the extremely limited, indeed, virtually nonexistent, circulation of noble metal coins in southern and northern mainland Greece during this period. Hoards with *histamena* of this period are mentioned from Crete (Ayies Paraskies, 1962); see S. Alexiou, *AD* 18.B2 (1963): 313–14; from Chryse (Edessa), see N. Oikonomides, "Ἑθναυρός χρυσῶν νομισμάτων από τη Χρυσή Εδέσσης (10ος αιώνας)," in *Ευφρόσυνον: Αφιέρωμα στον Μανώλη Χατζηδάκη* (Athens, 1992), 435–38; and from Samos (Tigani, 1914).

⁸ Edwards, "Byzantine Coins," 140, no. 109.

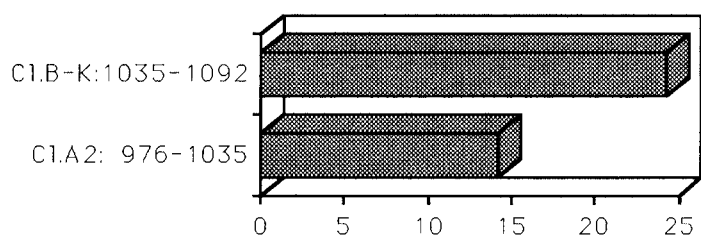
⁹ J. D. MacIsaac, "Corinth: Coins, 1925–1926," *Hesperia* 56 (1987): 138, no. 655.

¹⁰ R. L. Hohlfelder, *Kenchreai Eastern Port of Corinth*, vol. 3, *The Coins* (Leiden, 1978), 76, nos. 1173–79.

¹¹ C. Morrisson, "La Logariké: Réforme monétaire et réforme fiscale sous Alexis Ier Comnène," *TM* 7 (1979): 419–64; reprinted in eadem, *Monnaie et finances à Byzance: Analyses, techniques* (Aldershot, 1994), art. 6.



1. The number of coins lost annually during the period 830–1204 (excavations, 1896–1929)



2. The number of coins of the 11th century lost annually

impressively large. Comparison of coin circulation in Corinth in the twelfth century with that in the eleventh is difficult because the entire structure of the monetary system had changed. However, it is indicative that annual losses in the twelfth century were of the same order as in the eleventh. The highest rate of coin loss is apparent in the reign of Manuel I. This might be due partly to the Norman pillage in 1147¹² and partly to an increasing commercial activity. The high loss rate for coins of Andronikos I was perhaps affected by the political instability and the anomalous circumstances of the emperor's ascent to the throne. This also indicates a continuous flow of currency in Corinth.

The rate of discovered gold hyperpyra or even electrum trachea is minimal. The gold finds are limited to four hyperpyra of Alexios I,¹³ two of which possibly constitute a small hoard,¹⁴ and a hoard of thirty hyperpyra of Manuel I.¹⁵ To these exceptions can be added an hyperpyron of Alexios I, part of some travel hoard—together with 119 deniers Clermont and 1 denier le Puy—lost around 1098.¹⁶ This hoard, together with a second find containing six anonymous folles of the preceding period along with sixty-five bronze issues of the Seljuks of Syria, and concealed around 1100,¹⁷ cannot be considered as representing local transactions. They do, however, reveal that in the early twelfth century Corinth continued to be a crossroads for travelers; it was here, sometime in the mid-twelfth century, that a pilgrim en route to the Holy Land lost his purse containing nine coins from Valence and five from Lucca.¹⁸

It is true that the lack of noble-metal coins could be due to the fact that people were more careful with these denominations and consequently the number of their accidental losses was lower. However, the lack of noble-metal coins in Corinth, a phenomenon localized to the whole of the southern Greek mainland,¹⁹ in connection with the lack of savings hoards consisting of gold issues or of electrum trachea, as well as the minimal presence of billon trachea, hints at some local peculiarities as regards the trends of the current circulation of coins. The abundance in which tetartera and half tetartera are found in Corinth, either as stray finds or as hoards, leads to the same conclusion. These small denominations were virtually the only coins in circulation in the Corinthian market.

The historical evidence for the twelfth century seemingly contradicts these remarks. Corinth, Thebes, and Sparta are mentioned as considerable export centers for various commodities, including silk. The tetartera, although numerous, hardly reflect the in-

¹² Some small coin hoards could have been also inadvertently included in the cataloguing of isolated finds.

¹³ Edwards, "Byzantine Coins," 141, no. 116.

¹⁴ Metcalf, *Coinage in South-Eastern Europe*, 108 and n. 19.

¹⁵ See J. Harris, "A Gold Hoard from Corinth," *AJA* 43 (1939): 268–77; M. Hendy, *Coinage and Money in the Byzantine Empire, 1081–1261* (Washington, D.C., 1969), 99 and n. 6.

¹⁶ Edwards, "Byzantine Coins."

¹⁷ Metcalf, *Coinage in South-Eastern Europe*, 99–100 and n. 7.

¹⁸ Edwards, "Byzantine Coins"; see also Metcalf, *Coinage in South-Eastern Europe*, 99 and n. 6.

¹⁹ For gold finds in mainland Greece, generally, see I. Touratsoglou, "Θησαυρός ἀσπρων τραχέων/ 1983 από την Άρτα," *ΑΔ* 36 (1981), *Μελέτες* (Athens, 1989), 217 and esp. n. 22.

formation in the sources concerning the region's flourishing economy. For the moment, we can speculate that trade and the management of monetary affairs were in the hands of the upper class, of foreign merchants, and of commercial agents and that the small coin issues probably represented a token currency established for practical reasons to facilitate trading transactions and mass payments. It is difficult to determine the factors that contributed to the dominance of this peculiar regime in the specific region and to the differentiation of the circulation of money here from that in other urban centers of the empire. These should obviously be sought in local social and economic structures.

The dearth of evidence on the permanent population of Corinth, on the standard of living of its inhabitants, their occupations, the size and nature of productive enterprises, on labor and social relations between the workforce and the ruling class, leaves a series of questions unanswered. In the context of this study, the crucial issue is to what extent the dominance of the tetartera and the half tetartera as token money in the region was imposed by the current demands of monetary circulation at the level of everyday transactions. The numismatic, archaeological, and historical data in this question are, unfortunately, fragmentary. I mention indicatively that during the reign of Theophilos, when a drastic revival in the circulation of copper coinage is observed in Corinth, folles of two specific stylistic groups circulated almost exclusively in the region.²⁰ The weight range of these issues was at lower levels than that of other groups, totally absent from the region.²¹ In addition, the savings hoards of copper coins of the eleventh and twelfth centuries,²² which are attested at Corinth, also reflect the habits of a society made up not of wealthy landowners, but of industrious individual citizens, who succeeded in creating family businesses and cottage industries in this rather barren and mountainous land. From this patchy evidence, the question arises whether the numismatic peculiarities analyzed here suggest that the cost of living and consumption in the region were lower than that in others. Further examination of the numismatic evidence is imperative.

²⁰ These are groups Στ' and Ζ'; see Metcalf, "Corinth in the Ninth Century," and *Coinage in South-Eastern Europe*, 30, table 1.

²¹ The average weight of the folles of group Στ' ranges between 7.50 and 5.50 g, with the greater concentration of 2%, to 7.50–6.50 g. The average weight of group Ζ' is between 6.50 and 5.50 g, while that of groups Α' and Β' is between 8.50 and 7.50 g.

²² The composition of these hoards is reminiscent of gold savings hoards from Bulgaria and Dobruja. I cite indicatively the hoard found at Corinth in 1911/12 and now in the Numismatic Museum of Athens (inv. no. 1911/12, Νβ/α), which includes folles of Leo VI, Romanos I, anonymous issues of the 11th century, and tetartera of John II. The hoard discovered in 1937 is of similar composition and includes issues from the reign of Basil I, Leo VI, anonymous issues, and tetartera of Alexios I, John II, and Manuel I. See Harris, "Coins Found at Corinth," 146.

Kherson and Its Region

Anne Bortoli and Michel Kazanski

Lying on the southwestern coast of the Crimea, Kherson was a Byzantine military and administrative center north of the Black Sea that remained part of the empire until the end of the fourteenth century.¹ The town occupied an extremely important defensive position, being an obligatory stopping-off place on the route to the Dnieper estuary, which led to the Pontic steppes and Russia. The sea routes, through the Cimmerian Bosphoros to the Sea of Azov in the east and to the Dneister estuary and Danube delta in the west, also passed near Kherson. Furthermore, the town played a dominant role in the political and economic life of the Crimean peninsula as a whole.

Archaeological excavations have revealed that Kherson's very regular town plan, inherited from the Hellenistic age, was retained, by and large, during the whole of the Middle Ages (Fig. 1). New public buildings, especially the churches, were inserted within the existing plan. Kherson's medieval ramparts also tended to follow the line of its ancient fortifications. The necropolis outside the town had occupied the same site, without interruption, since antiquity. In the same way, much of medieval Kherson's social and economic topography remained unchanged. To the south, the fortress, by then integrated within the town walls, retained its military role (Fig. 1, A). The port and its associated commercial activities persisted throughout the town's history on the same southeastern site near the fortress (Fig. 1, B). The northeastern quarters contained the principal public buildings, notably large churches and a basilica (known as Uvarov), which may be considered the cathedral. The urban nobility was certainly concentrated in this sector of the town.

This chapter was translated by Sarah Hanbury Tenison.

¹ The principal works on the history and archaeology of Byzantine Kherson are N. M. Bogdanova, "Kherson v X–XV vv.: Problemy istorii vizantiiskogo goroda," in *Prichernomor'e v srednie veka* (Moscow, 1991), 8–172; A. L. Jakobson, *Srednevekovyi Khersones, XII–XIV vv.*, *Materialy i issledovaniia po arkheologii SSSR* 17 (Moscow–Leningrad, 1950); A. L. Jakobson, *Rannesrednevekovyi Khersones, Materialy i issledovaniia po arkheologii SSSR* 63 (Moscow–Leningrad, 1959); A. I. Romanchuk, *Khersones VI–pervoi poloviny IX v.* (Sverdlovsk, 1976); A. I. Romanchuk, *Khersones, XII–XIV vv.: Istoricheskaia topografiia* (Krasnoiarsk, 1986); A. L. Jakobson, *Keramika i keramicheskoe proizvodstvo srednevekovoi Tavriki* (Leningrad, 1979).

At the end of the sixth and the beginning of the seventh centuries,² Kherson experienced a period of growth evident in a variety of ways, especially in the new buildings (notably the great quatrefoil church near the town's west gate) and in the abundant evidence pointing to extensive foreign trade (amphoras, *terra sigillata*, and glass from the Mediterranean). For instance, the closed contexts from the end of the sixth and the first quarter of the seventh centuries (Cistern 92, the well in the first town quarter, or the house with the *pithoi*) have produced amphoras and *terra sigillata* vessels from the Mediterranean basin (including LRA [Late Roman Amphora]-1, LRA-2, LRA-3, LRA-5, Keay LXII, "Carrot" amphoras, Egyptian *spateia* amphoras, *terra sigillata* LRC, and African amphoras.³ These finds serve to confirm Kherson's importance as a port (Fig. 2). During this period, Kherson also possessed a mint, and the local population was very productively engaged in, for instance, fishing and manufacturing work. That the catch was large is indicated by the considerable number of cisterns for salting fish (Fig. 3).⁴ Furthermore, archaeological finds have revealed the manufacture of metal artifacts, especially jewelry and accessories for clothes (belt buckles with decorative plaques, both the gadrooned and the cruciform types).⁵ These objects are distributed throughout the Crimea and were copied by the peninsula's craftsmen.⁶ Although Kherson's agricultural surroundings have not been sufficiently studied, the archaeological evidence from parcels of farmland around the town shows that a few agricultural units continued to be worked from the Roman period to the sixth and seventh centuries.⁷ Rural habitation sites, dated by Mediterranean amphoras to the sixth to seventh centuries, have been spotted close to the town, notably in Kilen-Balka, Zagaitanskaia Skala, and on the peninsula of Herakleia. These unfortified sites were agricultural, formed from units of farmland linked by roads. The dwellings were surrounded by buildings of an economic nature: grain silos, mills, and winepresses have been exca-

² See the bibliography for Kherson and the Crimea during the earlier period in A. Bortoli-Kazanski and M. Kazanski, "Les sites archéologiques datés du IV^e au VII^e siècle au nord et au nord-est de la mer Noire: État des recherches," *TM* 10 (1987): 437–89; M. Kazanski and V. Soupault, "Les sites archéologiques de l'époque romaine tardive et du haut Moyen-Age en Crimée (III^e–VII^e s.): Etat des recherches (1990–1995)," in *Les sites archéologiques en Crimée et au Caucase durant l'Antiquité tardive et le haut Moyen Age* (Leiden, 2000), 253–93.

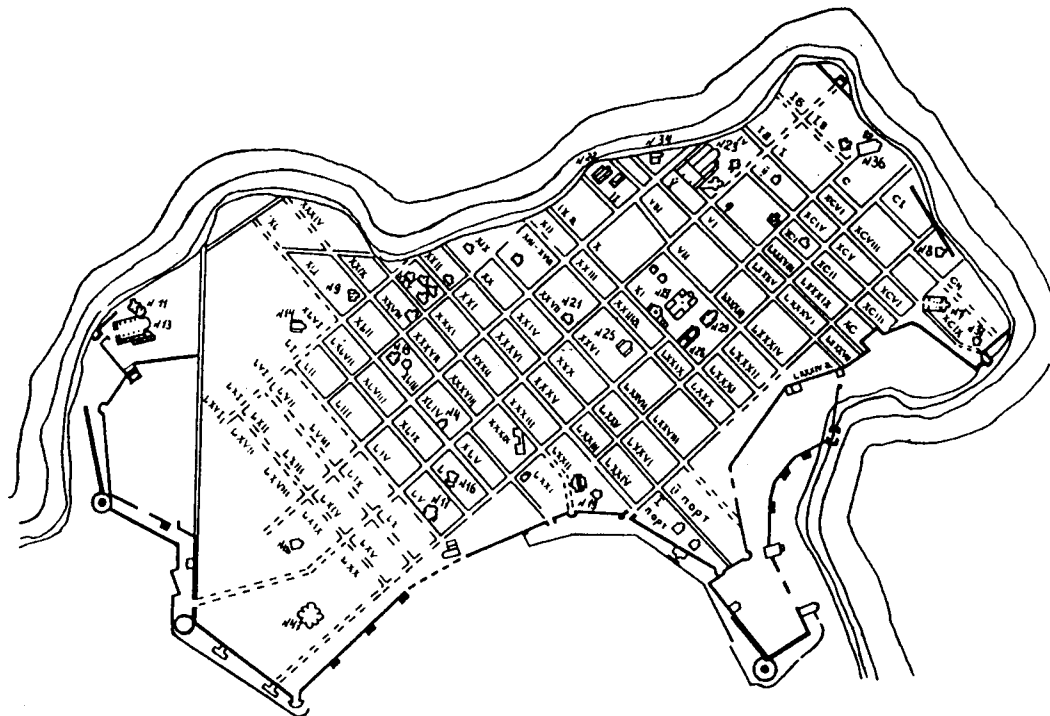
³ A. I. Romanchuk and A. V. Sazanov, *Srednevekovyi Kherson: Istoriia, stratigrafiia, nakhodki*, vol. 1, *Krasnolokovaia keramika rannevizantiiskogo Khersona* (Sverdlovsk, 1991); A. I. Romanchuk, A. V. Sazanov, and L. V. Sedikova, *Amfory iz kompleksov vizantiiskogo Khersona* (Ekaterinburg, 1995); A. Sazanov, "Les ensembles clos de Kherson de la fin du VI^e s. au troisième quart du VII^e s.: Les problèmes de la chronologie de la céramique," in *Les sites archéologiques* (as above, note 2), 123–49.

⁴ Romanchuk, *Khersones*, VI–IX, 14; eadem, "Plan rybozasolochnykh cistern Khersonesa," *ADSV* 14 (1977): 18–27.

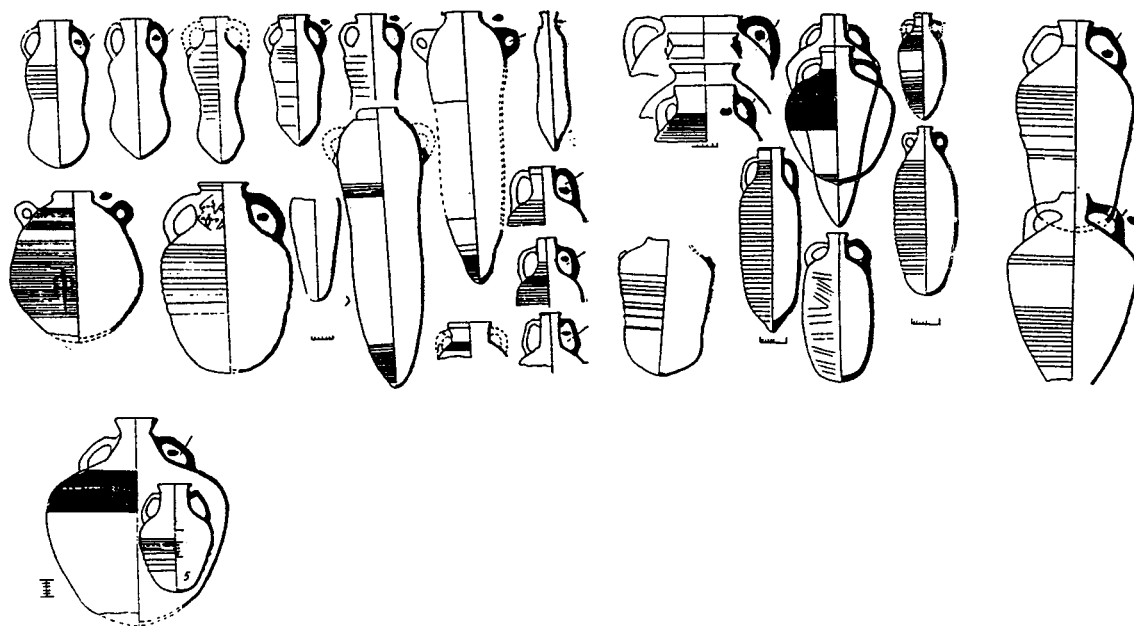
⁵ A. Ajabin, "La fabrication des garnitures de ceintures et des fibules à Kherson, au Bosphore Cimmérien et dans la Gothie de Crimée aux VI^e–VIII^e siècles," in *Outils et ateliers d'orfèvres des temps anciens* (Saint-Germain-en-Laye, 1993), 167; M. Kazanski, "Les plaques-boucles méditerranéennes du Ve–VI^e siècles," *Archéologie médiévale* 24 (1994): 162, 163.

⁶ Ajabin, "La fabrication."

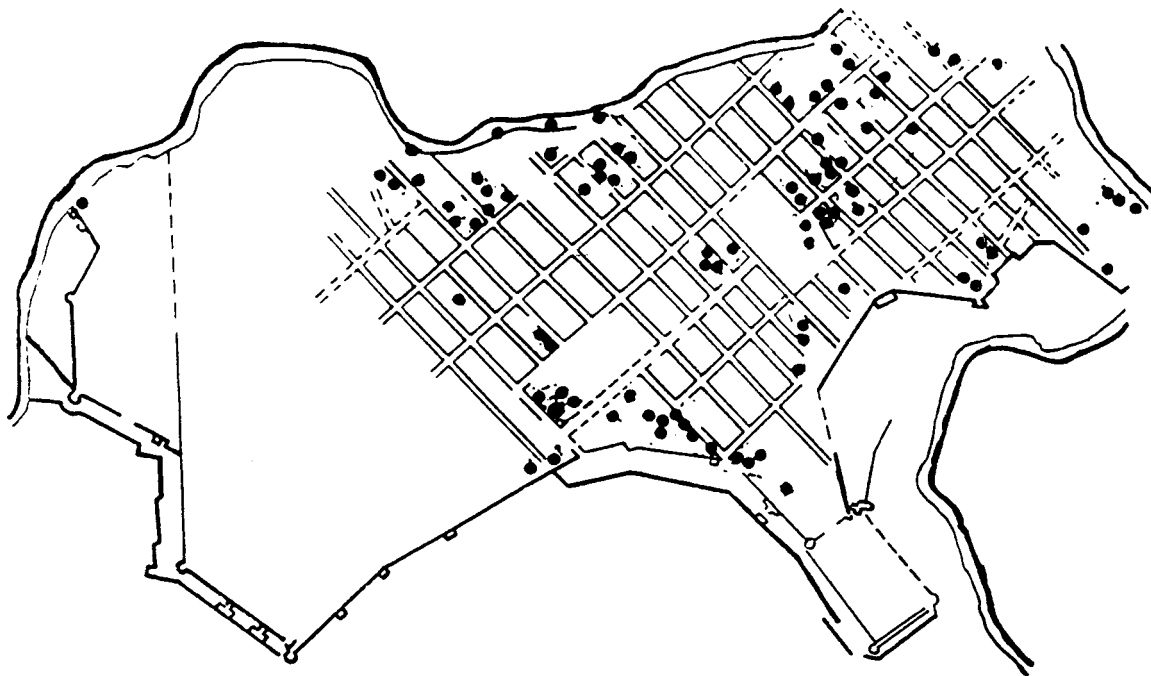
⁷ For rural habitats in the Crimea, see, in the first instance, A. L. Jakobson, *Rannesrednevekovye sel'skie poseleniia Iugo-Zapadnoi Tavriki*, *Materialy i issledovaniia po arkheologii SSSR* 168, (Leningrad, 1970).



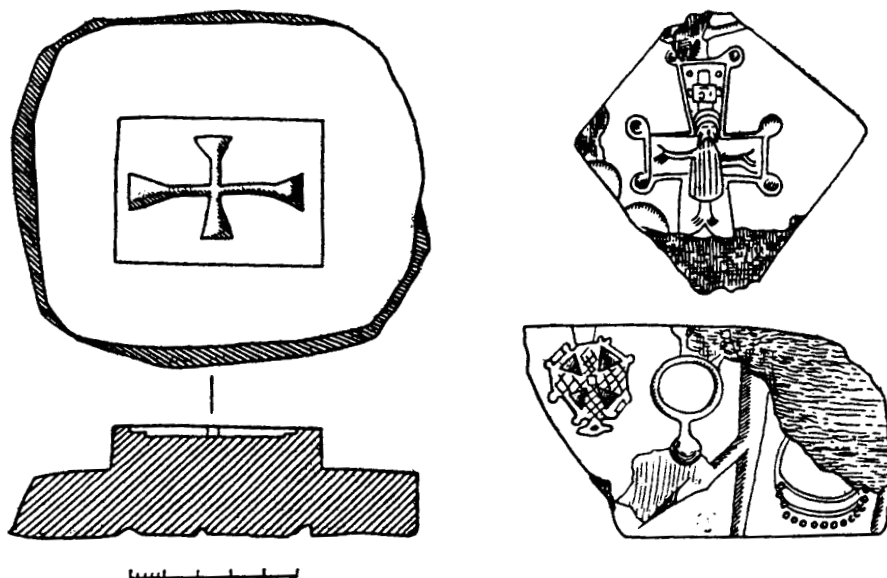
1. Map of medieval Kherson, 11th–14th centuries: A: the fortress; B: the port (after A. I. Romanchuk, *Khersones, XII–XIV vv.* [Krasnoiarsk, 1986], 11, fig. 1)



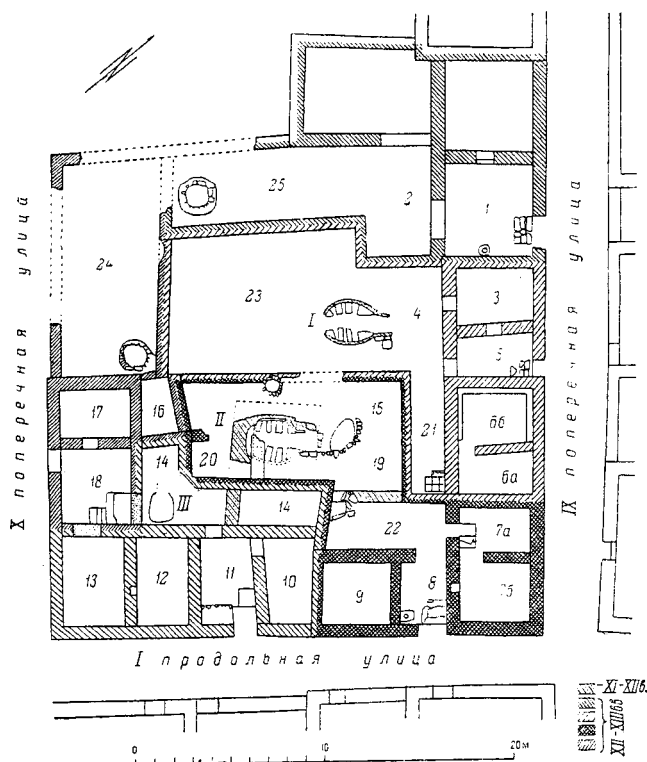
2. Amphoras discovered in the port quarter, Kherson, 7th century (after A. I. Romanchuk and O. R. Belova, *Antichnaia drevnost' i srednie veka* 24 [1987]: 61, figs. 2, 3)



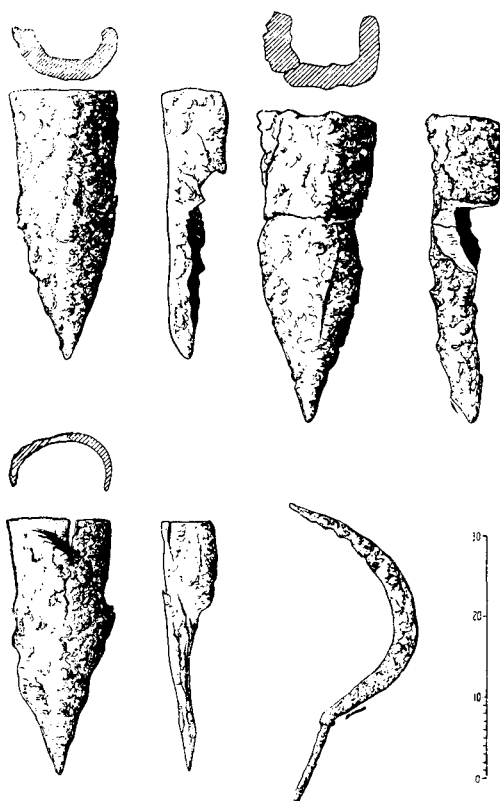
3. Topography of the medieval cisterns for salting fish, Kherson (after A. I. Romanchuk, in *Antichnaia drevnost' i srednie veka 14* [1977]: 24)



4. Molds for casting objects in bronze, 9th–10th centuries, Kherson (after A. L. Iakobson, *Rannesrednevekovyi Khersones* [Moscow–Leningrad, 1959], 327, fig. 179)



5. Kherson, a quarter in the northern part of the town, excavated in 1940 (after A. L. Iakobson, *Srednevekovyi Khersones, XII-XIV vv.* [Moscow-Leningrad, 1950], 154, fig. 89)



6. Agricultural implements, Kherson, 12th-14th centuries (after Iakobson, *Srednevekovyi Khersones*, 95, fig. 44)

vated.⁸ The presence of Mediterranean amphoras reveals that this rural environment was in contact with towns, primarily Kherson. On the other hand, finds made in sixth- and seventh-century necropoleis in the countryside around Kherson (Chernaia Rechka, Inkerman, Sakharnaia Golovka) indicate the presence of a Hellenized barbarian population (mainly Alans and Goths).⁹

For the period from the mid-seventh to the eighth centuries, known as the Dark Ages, we possess an account by Pope Martin I. He was exiled to Kherson in 655, where he wrote an account of the high cost of living and food shortages that illustrates the very difficult economic situation prevailing there.¹⁰ This picture is slightly modified by the rare archaeological evidence. Imported Mediterranean amphoras and *terra sigillata* (LRA-1, LRA-2, LRA-4, LRA-5/6, and some African *terra sigillata* Hayes 95, 105, LRC 3F and G, etc.) have been found in Kherson dating from the second half of the seventh century (notably in the burned level near section XVIII, dated to 650–670 by coin finds of 641–668).¹¹ Traces of bronze workshops have also been found, together with molds for the manufacture of ornaments for belt straps typical of the seventh century, molds for casting square buckles, dated to the second half of the seventh and eighth centuries, and rigid buckles with plaques, rejected as imperfect, dating from the second half of the seventh century.¹² As in the preceding period, products from these workshops were widely distributed throughout the Crimea. It was precisely during the second half of the seventh and eighth centuries that the civilization of the southwestern Crimea shows the influence of Byzantium, in both the population's clothing and its funerary practices.¹³ The town of Kherson also retained its Byzantine character and could not be described as barbarian or as barbarized. So the causes of the crisis recorded by Pope Martin I must be sought among the political events that were then rocking the empire and, most particularly, the Crimea: the Turco-Khazar conquests, which destroyed the town's traditional links with the rest of the peninsula.

The Crimea experienced new growth between the eighth and tenth centuries, reflecting the improved political situation: the alliance with the Khazar kingdom and the settlement of a new sedentary Turco-Bulgarian population on the peninsula.¹⁴ Some historians also stress the role of Greek immigration from Byzantium.¹⁵ While this immigration has not yet been proven, the Byzantinization of the Crimea's material culture is still obvious in this period. It was manifest in the population's clothing, pottery, and

⁸ I. A. Baranov, "Pamiatniki rannesrednevekovogo Kryma," in *Arkheologiia Ukrainskoi SSR* 3 (1986): 237.

⁹ Ajbabin, "La fabrication."

¹⁰ O. R. Borodin, "Rimskii papa Martin I i ego pis'ma iz Kryma," in *Prichernomor'e v srednie veka* (Moscow, 1991), 173–90.

¹¹ Sazanov, "Les ensembles clos"; A. I. Romanchuk and O. R. Belova, "K probleme gorodskoi kul'tury rannesrednevekovogo Khersonesa," *ADSV* 54 (1987): 52–68.

¹² Ajbabin, "La fabrication," 167.

¹³ Baranov, "Pamiatniki," 240, 241; I. A. Baranov, *Tavrika v epokhu rannego srednevekov'ia* (Kiev, 1990), 106–9, 129–39.

¹⁴ For the Khazar presence and the Turco-Bulgarian population in the Crimea, see Baranov, *Tavrika*.

¹⁵ Baranov, "Pamiatniki," 241.

glass.¹⁶ In the same way, the dominance of typically Byzantine funerary rites may be observed (inhumation in tombs built of stone slabs), as well as the construction of new basilicas in rural sites (for instance, in Partenit and Tepsen).¹⁷ Although there is some argument¹⁸ about the state of Kherson's economy, it did retain its political and military role. As indicated above, the governor of Kherson's *climata* (the area under Byzantine rule in the southwestern Crimea) had his seat in the town. With regard to the townsfolk's employment, the discovery of cisterns for salting fish¹⁹ and depots of *pithoi* shows how important the fishing industry was. Traces of several workshops have been found, notably bronze workshops (Fig. 4)²⁰ manufacturing buckles with plaques for Corinth-type belts (8th–9th centuries),²¹ and pottery workshops producing amphoras, tiles, and pitchers.²²

During the second half of the ninth century, Kherson's mint struck an increased quantity of coins, which suggests that trade was flourishing. We know that Kherson retained close economic relations with the rest of the Crimea because the town's manufacturing products are found elsewhere in the peninsula. Many amphoras from the eighth to tenth centuries have been discovered north of the Black Sea and they too probably came from Kherson, where, as we know, amphoras were manufactured at that time. Among the finds from Kherson dated to the ninth and tenth centuries, the non-Byzantine pottery requires a mention: Turco-Bulgarian or Alan pottery from the Khazar kingdom and pottery from Trans-Caucasus.²³ Indeed, there is plenty of evidence for commercial relations with the Khazar kingdom.²⁴ As for economic contacts with Byzantium, these can be substantiated by the discovery of amphoras from Constantinople and of glazed wares. The similarity between the pottery (notably amphoras), metal goods, and glass from Kherson and those of the Mediterranean world presupposes very close economic relations. As yet, little is known about the town's agricultural surroundings. Evidence for continuity during the eighth to tenth centuries is known only in the case of Zagaitanskaia Skala, Kamyshovaia Bukhta, and Khomutova Balka. Zagaitanskaia Skala retained the same character as in the preceding period. At

¹⁶ See, notably, A. I. Aibabin "Mogil'niki VIII–nachala X vv. v Krymu," *Materialy po arkheologii, istorii i etnografii Tavrii* 3 (1993): 121–32.

¹⁷ Baranov, "Pamiatniki," 243.

¹⁸ A. L. Jakobson thinks that the town underwent a profound decline during the Dark Ages, from which it emerged only at the end of the 9th century and, especially, during the 10th century. Jakobson, *Rannesrednevekovyi Khersones*, 35, 36; idem, *Srednevekovyi Krym* (Leningrad, 1964), 27; idem, *Krym v srednie veka* (Moscow, 1973), 30, 31. A. I. Romanchuk stresses that economic activity persisted at Kherson during the 7th to 8th centuries. Romanchuk, *Khersones*; A. I. Romanchuk and L. V. Sedikova, "Temnye veka' i Kherson: Problema representativnosti istochnikov," in *Vizantiiskaia Tavrika* (Kiev, 1991): 30–46.

¹⁹ Romanchuk, *Khersones*, VI–IX, 16.

²⁰ Ibid., 31; Bogdanova, "Kherson," 129; for the molds and crucibles found at Kherson, see Jakobson, *Rannesrednevekovyi Khersones*, 322–30.

²¹ Ajbabin, "La fabrication," 168.

²² Jakobson, *Rannesrednevekovyi Khersones*, 306, 307; Jakobson, *Keramika*, 31, 33, 39, 51–53, 71, 93.

²³ Jakobson, *Keramika*, 80–82.

²⁴ Bogdanova, "Herson," 62–65.

Kamyshovaia Bukhta, we know of several buildings arranged as a unit around a large courtyard. At Khomutova Balka, traces of a circular building, probably a tower, have been uncovered. This period came to an end in the tenth century, when Kherson was largely destroyed and burned, traces of this have been found in various town quarters. Some historians have attributed this disaster to the Russian prince Vladimir's expedition against Kherson in 988.²⁵

During the eleventh to fourteenth centuries, Kherson was the last Byzantine possession north of the Black Sea from which the empire was still able to control the southwestern Crimea. While the town retained its importance in the eleventh to twelfth centuries, the situation altered during the thirteenth century.²⁶ The installation of Tatars during the first half of the thirteenth century and the Golden Horde's acquisition of the peninsula directed the Crimea's economic links eastward. Furthermore, military action by the Tatars, notably the destruction of the town at the end of the thirteenth century by Khan Nogai, caused Kherson's economic situation to deteriorate further. In the thirteenth to fourteenth centuries, Kherson was exposed to keen competition from the Italian traders of Kaffa. All of this contributed to the town's political and economic decline, leading to its demise at the very end of the fourteenth century, when the Tatars destroyed the town. Archaeologists have nonetheless found evidence, even in this final period, of a well-developed local manufacturing industry. Several pottery workshops have been discovered, including a thirteenth-century one that produced tiles (Fig. 5), a bone workshop and a forge dating from the thirteenth to fourteenth centuries, two metal workshops, one dating from the ninth to eleventh centuries and the other from the end of the twelfth and the thirteenth centuries, and many traces of glass manufacture.²⁷ The craftsmen worked partly to order and partly for the market, using mainly local raw materials. The workshops were mostly small and set in the inhabited quarters alongside the craftsmen's houses (Fig. 5).²⁸

By this period, it is noticeable that the town had to some extent become more agricultural, as manifested by a more intensive use of agricultural land in the suburbs. The houses have been found to contain grains of wheat, oats, and millet as well as the bones of *bovidae* and *cervidae*, horses, pigs, and fowl. Agricultural implements are also well represented among the archaeological finds in Kherson's stratigraphical layers dating to that period (Fig. 6).²⁹ Fishing also retained its importance as a secondary form of employment: we know of two cisterns for salting fish that date from the ninth to twelfth centuries. Written sources provide evidence of salt-panning by the inhabitants during this period. Kherson was still a maritime port in spite of competition from the port of Balaklava, which belonged alternately to the prince of Theodoro (modern

²⁵ Jakobson, *Rannesrednevekovyi Khersones*, 65; idem, *Srednevekovyi Khersones*, 14; for a critique of this point of view, see A. I. Romanchuk, "Sloi razrusheniia X v. v Khersonese," *VizVrem* 50 (1989): 182–88.

²⁶ Regarding recent discoveries from this period in Kherson, see Romanchuk, *Khersones*, XII–XIV vv.

²⁷ Jakobson, *Keramika*, 155–57; Bogdanova, "Kherson," 24, 30, 34.

²⁸ Bogdanova, "Kherson," 43–46.

²⁹ Jakobson, *Srednevekovyi Khersones*, 95, 96; Bogdanova, "Kherson," 46–50.

Mangoup) and to Italians. The town's outside contacts were directed mainly toward Asia Minor, and these economic links serve in part to explain its political orientation toward the empire of Trebizond. On the other hand, archaeologists have uncovered evidence for a substantial Russian trading presence in the town.³⁰ Amphoras from Asia Minor, glazed Byzantine wares, glass, ivories, and decorated enamel artifacts from Constantinople point to the persistence of foreign trade, notably with the Mediterranean.³¹ Some copper and lead ingots originated in Asia Minor.³² The town's economic contacts with the rest of the Crimea remained important, since part of its manufacturing produce was distributed among the villages and small towns of the southwestern Crimea (Mangoup, Eski-Kerman). Unfortunately, Kherson's agricultural surroundings in the eleventh to fourteenth centuries have not been sufficiently studied for their features to be properly known.

The town's social and economic topography in this period can be observed fairly easily. Whole workshops have been excavated in the north and northwest parts near the coast.³³ Analysis of the houses in the northern sector has shown that the population included merchants, carpenters, masons, bronzeworkers, fisherfolk, priests, bakers, and innkeepers.³⁴ We know that this sector also contained foreign merchants because several houses have been identified by archaeologists as belonging to a Russian community.³⁵ In the part by the port, the archaeological evidence points to the presence of Italian, Russian, Armenian, Arab, Tatar, and Alan nationals who were certainly involved in trade. Craftsmen and merchants also lived in the northeastern quarters, where the large public buildings were still sited during this period. There is evidence showing that the inhabitants of this sector (especially in sections III, VI, and VII) were prosperous.

³⁰ Bogdanova, "Kherson," 77–81.

³¹ Jakobson, *Keramika*, 111; Bogdanova, "Kherson," 55–59, 71–77.

³² Bogdanova, "Kherson," 24.

³³ Jakobson, *Srednevekovyi Khersones*, 94–100; Romanchuk, *Khersones, XII–XIV vv.*, 77–92.

³⁴ Romanchuk, *Khersones, XII–XIV vv.*, 81–92, pl. 1.

³⁵ *Ibid.*, 44.

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Preslav

Ivan Jordanov

In the year 6477 (969), Svjatoslav is reported as saying, “I . . . should prefer to live in Pereiaslavets on the Danube, since that is the center of my realm, where all riches are concentrated: gold, silks, wine, and various fruits from Greece, silver and horses from Hungary and Bohemia, and from Rus’ furs, wax, honey, and slaves.” (*Russian Primary Chronicle*, XI C. “Povest’ vremennykh let”). Medieval Preslav was situated south of the modern town of the same name. The name Preslav is mentioned in the written sources—inscriptions, seals, and Byzantine and Bulgarian chronicles—in various forms: *ГРАДЪ ПРѢСЛАВЪ*, *Πρεσθλάβα*, *Ἰωαννούπολις*, *Πρεσθλαβίτζα*, *Μεγάλη Πρεσθλάβα*, *ΒΕΛΗΚ'ΖΙ ΓΡΑΔЪ ΠРѢСЛАВЪ*, Eski Stamboul.

Judgments about the place and role of Preslav in medieval Bulgaria, Byzantium, and the world of the time can be reached on the basis of the information provided by contemporaneous sources and of the data from archaeological excavations. Regular archaeological excavations have been conducted in Preslav for nearly a hundred years, and the picture of life in the city they suggest is summarized here.

The medieval settlement of Preslav was founded during the eighth to ninth century. Before being proclaimed the capital of Bulgaria, it had been a strategic fortress. It was the residence of one of the chief assistants of the ruler, the *Icergü Boila* (ἡτζίργων βωύλε)—a military commander and diplomat—and it had a strong garrison and stores for heavy armaments (chain-mail and helmets) to equip a large part of the Bulgarian army.¹ Preslav was proclaimed the capital of Bulgaria in 893. It was captured in 969 by Sviatoslav of Kiev and in 971 by John I Tzimiskes. The Bulgarians reoccupied it in ca. 986, and the Byzantines about the year 1000. Thus it was under Byzantine rule from 971 to 986 and from 1000 to 1185. Under the second Bulgarian empire (1185–1393), Preslav remained an important city until its capture by the Ottoman Turks in 1388. This discussion of the economy of Preslav covers both the period when Preslav was a capital city and the period of Byzantine rule. The chronology of the archaeological finds is not always easy to establish.

¹ I. Venedikov, *Voennoto i administrativno ustroistvo v Srednovkovna Bŭlgaria prez IX i X vek* (Sofia, 1979), 23–24, 39–40.

Preslav acquired the status of a central settlement when the state capital moved there. The capital consisted of an inner and an outer city. The inner or royal city (Fig. 1, A) was situated on a higher terrace, which served as a citadel. It was the location of the main state institutions: the palace of the Bulgarian ruler, the cathedral, the residence of the Bulgarian patriarch, and the various departments of the central state administration. The inner city was surrounded by a white defensive wall of stone, 12–14 m in height. There were gateways at each of the four cardinal points connecting the palace with the rest of the world.

The outer city had an area of 3.5 km² and lay between the citadel and the outer defensive wall. This was the town *per se*, but because of the rough, broken terrain, the density of the population was not high. Furthermore, the outer city consisted of several sections that varied substantially in their social functions. The northern section (Fig. 1, B) was the most extensive. In its lower part, along the Rumska River, was the quarter of the artisans. Probe excavations there have identified the presence of workshops (belonging to blacksmiths, potters, carpenters, and jewelers) producing commercial articles for the market. Of interest here is the etymological interpretation of the name of the river. Some scholars link it with the Bulgarian ethnonym *romei* (= Ῥωμαῖον, Byzantines), suggesting that the artisans' quarter may have been connected by origin, or by production, with Byzantium. Regrettably, it has not been possible to corroborate this hypothesis to date since the efforts of the archaeologists have not yet focused on this part of Preslav.² Although this was the main productive part of the city, it has not yet been the object of sustained study.

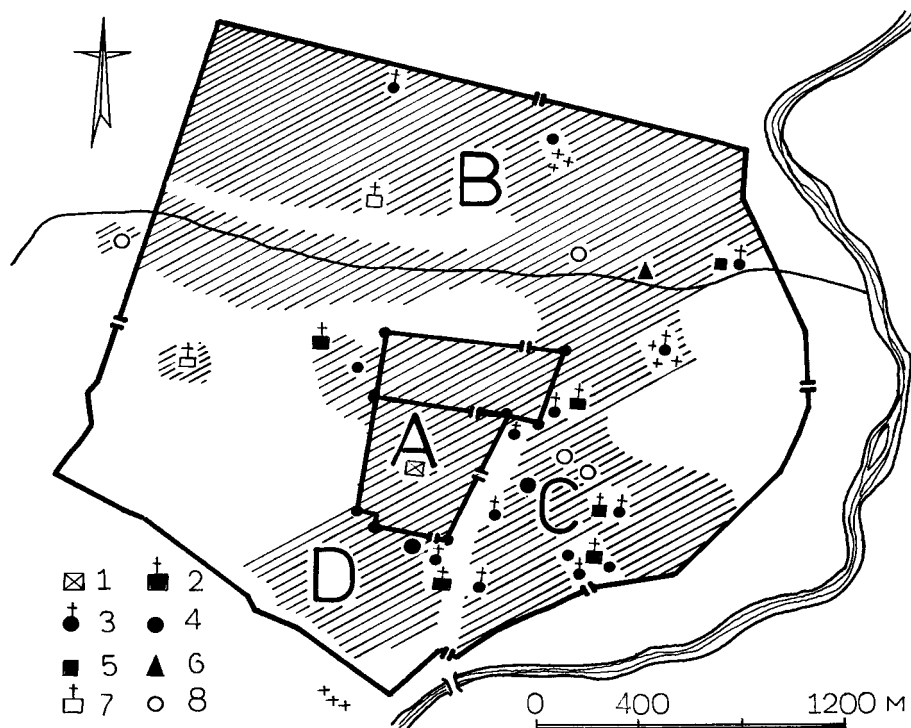
A second large section, distinct from the first, was located along the Tica River on a flat terrace called Selishte (Fig. 1, C). It was the location of monastery complexes, feudal estates, and large houses. Manufacturing equipment has also been found there, but it can be presumed to have been for private use.

South of the inner wall was a third and smaller section (Fig. 1, D). The most significant architectural monument there is the Round Church, a major monument of Bulgarian art. Of special interest here, however, is the large marketplace that has been discovered. It consists of eighteen commercial premises, equal in size, attached to the south defensive wall and in front of the South (and main) Gate on the road leading to Constantinople (Fig. 2). The material found in these buildings confirms that they were shops, selling various local and imported goods. There were a great number of Byzantine amphoras for transporting liquids (most probably high-quality wines) from Constantinople.³

In and around the outer city of Preslav, many monasteries and estates have been excavated. These monasteries were the center for the production of the painted deco-

² D. Ovcharov, "Vŭznikvane i oformiane na Preslav kato srednovekoven grad," in *Srednovekovniiat bŭlgarski grad* (Sofia, 1980), 110–11.

³ I. Changova, "Tŭrgovskite pomesteniiia kraii iuznata krepostna stena na Preslav," *Izvestiia na arkheologicheskiia Institut* 22 (1957), 233–90.



1. Map of Preslav in the 10th century (B. Petrova)



2. Preslav, chain trade premises in front of southern defense wall (photo: H. Karagyozyai)



3. Two-sided necklace from the Preslav treasure (photo: H. Karagyozyai)



4. Gold diadem plaques with cloisonné enamel decoration from the Preslav treasure (photo: H. Karagyozyai)

rative ceramics (in porcelain clay), floor and wall mosaics, and other applied art objects for which Preslav was well known.⁴ Outside the capital, in settlements within a radius of 10 km or more, such as Nadarevo, Kralevo, or the villages now beneath the Vinitza artificial lake, there were centers (workshops) specializing in the production of bricks, tiles, water pipes, cast metal, and other items needed for the buildings in the capital city.

Local Manufacturing

The traditional occupations of the area were agriculture, livestock breeding, and above all viticulture. Materials have been found that testify to almost all kinds of manufacturing: ironwork, pottery, ceramics for everyday use, luxury ceramics, painted ceramics, glasswork, jewelry, ivory, and marble.

Imported Items

Imported items must be those to which the Russian prince Sviatoslav was referring when he stated that “all riches are concentrated” there. Most of the imports were Byzantine luxury goods, such as ceramics, cups, plates, and small art objects in white porcelain clay. In general, they date from the tenth century or the first half of the eleventh. Scores of well-preserved vessels and hundreds of fragments have been documented. Their high quality and style testify both to the achievements of the producer and to the good taste of the user who placed the order for the items. Their quantity, not differing greatly from that of the local luxury ceramics, indicates that regular imports were made from Constantinople and workshops in other parts of the empire. The same applies to the objects of the jeweler’s art, which are well represented in the so-called Preslav Treasure, which obviously belonged to members of the royal family (Figs. 3, 4).⁵ Church plate and objects in fine glass were also imported. Though found rarely in Preslav, ninth- and tenth-century pottery from the Near East should also be mentioned. Imports from and exports to Byzantium were under state control, exercised by the *kommerkia* of Develtos.⁶

Circulation of Money

Commerce in the first Bulgarian kingdom (681–971) was on a barter basis. This is one of the main reasons why the Bulgarian rulers of the time had no coinage. In trade with Byzantium, however, Byzantine coins were used. A considerable number of single coins and occasional hoards have been found in the vicinity of Preslav. The number of

⁴ T. Totev, *Manastirŭt v Tuzlalŭka: Centŭr na risavana keramika v Preslav prez IX–X v.* (Sofia, 1982); idem, *Preslavskata keramichna ikona* (Sofia, 1988).

⁵ T. Totev, “Vnosna keramika, stŭklo i nakitni predmeti v Preslav,” *Srednovekovna Bŭlgaria i moreto* (Varna, 1982), 79–81; idem, *The Preslav Treasure* (Shumen, 1993).

⁶ I. Jordanov, *Pechatite ot kommerkiarijata Devell* (Sofia, 1992).

Table 1
Byzantine Coins Found in the Vicinity of Preslav, 879–1393

Dating	AE	AV	AR	Total
879–886	2	6	—	8
886–912	97	—	—	97
913–971	80	5	—	85
971–976	51	—	8	59
976–1028	170	2	2	174
1028–1041	80	—	—	80
1041–1092	59	1	1	61
1092–1118	3	—	—	3
1118–1143	5	1	—	6
1143–1180	12	—	—	12
1185–1195	15	—	—	15
1195–1203	12	—	—	12
1203–1261	340	3	3	346
1261–1300	67	—	5	72
1301–1393	22	2	34	58
TOTAL	1,015	20	53	1,088

these coins is changing thanks to archaeological finds in recent years.⁷ The figures in Table 1 represent finds made up to 1989. Chronological analysis of the 1,088 single coin finds is an indication of a series of processes and, most of all, of life in Preslav. These finds can be classified in three chronological groups: 886–971, 971–1203, and 1203–1393.

The first group corresponds to the period when Preslav was the capital of the state. There are more than 180 Byzantine coins and one silver Arabian dirham. In the case of the gold coins only, we can hypothesize that these came from dealings between Bulgarian traders and Byzantium, that is, they were hoarded. But the majority of the coins are copper (folles), used in everyday transactions. They are evidence that Byzantine coins played a definite part in everyday life and in the money exchanges of Preslav, which, as the capital city, differed from the rest of the country.

The largest numbers of single coins (395) come from the period when Preslav, and Bulgaria, belonged to the empire (971–1185). This is natural, given that Bulgaria had joined the advanced money economy of Byzantium. However, the attestation is not

⁷ I. Jordanov, "Karakter na monetnata tsirkulatsiia v srednovekovnite bŭgarski stolici Preslav i Tŭrnovo," *Srednovekovniat bŭlgarski grad* (Sofia, 1980), 229–43; idem, *Moneti i monetno obrastenie v Srednovekovna Bŭlgaria, 1081–1261* (Sofia, 1984), 122–24, 200–202.

balanced for the entire period. Most of the coins are from the period between 971 and 1028 (233 specimens), which can be explained not only by the general prosperity of Byzantium but also by the fact that even after 971 Preslav retained its role as an important military, administrative, and economic center. After the middle of the eleventh century, the whole of northeast Bulgaria, including Preslav, was frequently the target of aggression from the new nomadic tribes (Pechenegs, Uzes, and others). Indeed, Preslav fell to the Pechenegs in 1053. This is the main reason (apart from the general political and economic crisis that affected the entire empire) for the sharp reduction in money exchanging in Preslav: only 61 coins date from this period, as opposed to 313 from the previous period.

In Preslav, unlike many other settlements in northern Bulgaria, there is attestation to money exchanges into the twelfth century. During the first half of the century, such exchanges were on a relatively low level, as a result not only of unfavorable conditions in the city but also of the withdrawal from circulation of the earlier, full-value, billon trachea.⁸ During the second half of the century, the number of coins is considerably larger, but still lower than those found in such cities as Athens and Corinth, an observation that corresponds to the impressions of contemporaries (e.g., al-Idrisi, Niketas Choniates).⁹ There was considerable economic growth in Preslav during the first half of the thirteenth century, when it was the second most important and second-largest city in the restored Bulgarian state.

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⁸ M. F. Hendy, *Coinage and Money in the Byzantine Empire, 1081–1261* (Washington, D.C., 1969), 170–71.

⁹ *Nicetae Choniatae Historia*, ed. J. L. van Dieten (New York–Berlin, 1975), 372, 45.2; B. Nedkov, *Bŭlgariia i sŭsednite zemi prez XII vekspored "Geografiata" na Idrisi* (Sofia, 1960), 81.

Tŭrnovo, Sixth–Fourteenth Centuries

Konstantin Dochev

Tŭrnovo is situated in the foothills of the Balkan mountain range (the Haemos in antiquity), bordering on the north Danube plain. The Yantra River, running through the town, forms four promontories: Tsarevets, Trapezitsa, Momina krepost (the Maiden's Fortress), and Sveta goro (the Holy Wood) (Figs. 1–3). The average altitude of the region is 180–280 m. During the Roman period (1st–4th centuries A.D.), two stone fortresses, on Tsarevets and Momina krepost, were built as part of the system of fortification that defended the important crossroads from the north through the Haemos toward the towns of Thrace and to Constantinople. More intensive habitation took place in the period from 350 to 450, when Gothic settlers arrived from the neighboring urban center of Nikopolis ad Istrum to guard the mountain passes.¹

New walls were built on Tsarevets, Momina krepost, and Trapezitsa in the time of Justinian I so as to prevent the incursions of Slavs and Avars. Three large churches, one of them the seat of a bishop, were built on Tsarevets. This large, well-fortified Byzantine town in the northern foothills of the Haemos survived until the beginning of the seventh century. About 615–620, it was destroyed by the attacks of Slavs and Avars.² Considerable numbers of coins (260 items, most of them copper) of the sixth and seventh centuries have been found, dating from the reigns of Anastasios (491–518, 40 coins), Justin I (518–527, 31), Justinian I (527–565, 55), Justin II (565–578, 35), Tiberios I (578–581, 7), Maurice (581–602, 14), Phokas (602–610, 21), and Herakleios (610–641, 15). Most of the coins were minted in Constantinople, Kyzikos, and Thessalonike.

From the eighth to the tenth century, the town declined and became an inner fortress of the first Bulgarian kingdom. During the period of Byzantine rule (1018–1186), it retained its position as a military fortress in the theme of Paristrion. There are few currency finds from the early eleventh century, though two gold histamena of Con-

¹ C. Patsch, *Beiträge zur Völkerkunde von Südosteuropa*, Sitzungsberichte der Akademie der Wissenschaften (Vienna, 1929), 208, III.1, pp. 34–36.

² N. Angelov, “Rannovizantiiski kulturen plast v Dvoretza,” *Tsarevgrad Tŭrnov* 1 (1973): 282–336, and idem, “Patriarsheski kompleks na Tsarevets,” *Tsarevgrad Tŭrnov* 3 (1980): 10–15.

stantine IX (1042–55) and thirty-two anonymous copper coins have come to light.³ This is to be explained by the existence of a natural economy and by the sparse population around the military fortress. During the second half of the eleventh century, the invasions of the Pechenegs, the Cumans, and the other Turkic tribes caused the almost complete destruction and depopulation not only of Tŭrnovo but of almost all the Byzantine fortresses between the Haemos and the Danube. A small hoard of six extensively burned copper coins has been found in a building on Tsarevets that had been destroyed by fire; the latest dates from the reign of Michael VII (1071–78). The victories of Alexios I in the 1090s over the Pechenegs and Cumans led to the reconstruction of the old settlements and to the partial return to them of the Christian population, which had taken refuge in the mountains. The final defeat of the Pechenegs and the other barbarian tribes and their expulsion across the Danube took place in the time of John II, after 1123.⁴ That victory inaugurated a period of relatively rapid growth in the building, restoration, and formation of urban centers north of the Haemos, and the characteristic features of commodity production and money exchange were introduced at the same time. However, since our information about the administrative position of the theme of Paristrion is scarce, we cannot be certain as to the role of Tŭrnovo as a local administrative center. During the eleventh and twelfth centuries, the town was probably the center of a small theme, the headquarters of a military command, and the seat of a bishop. There is secondary evidence for this speculation, including the place-name Trapezits, from the Greek *τραπεζίτης* for a soldier who guarded an important pass, crossroads, or border region. Further corroborative data are to be found in the lead seals of the *sebastos* (Georgios) Glabas, the *protospatharios* Staurakios, John Kinnamos, and Leon (who was probably a bishop).⁵

Archaeological investigations have shown that the new building activity on the fortress wall around the hill dates from the beginning of the reign of Manuel I and is connected with some large churches, one of which was rebuilt in the thirteenth century and incorporated into the palace complex on the same hill. This increase in building activity afforded an opportunity for the growth of productive activities in the town, including the extraction and processing of iron, stone-cutting, and the manufacturing of copper and lead, building ceramics, kitchenware, and domestic ceramics.⁶ It is no coincidence that when describing the events of 1196, Niketas Choniates notes that Tŭrnovo “is the most beautiful and best fortified of all the cities in the Haemos,”⁷ thus indicating that the town was built several decades earlier than the events described.

The beginning of manufacturing activities in Tŭrnovo dates from the Byzantine pe-

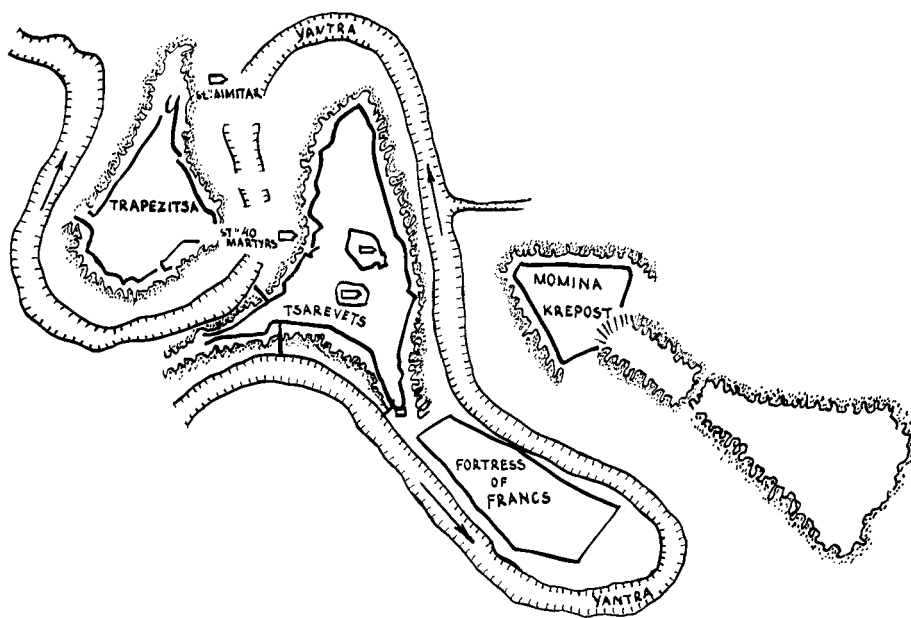
³ K. Dochev, *Moneti i parichno obrushtenie v Tŭrnovo (XII–XIV v.)* (Tŭrnovo, 1992), 11.

⁴ Michel Italikos, *Lettres et discours*, ed. P. Gautier (Paris, 1972), 83 and 285; A. Garzya, “Encomio inedito di Niceforo Basilace per Giovanni Axuch,” *RSBN* 6/7 (1969–70): 11; M. Bibikov, *Vizantiiskie istochniki po istorii Rusi (XII–XIII v.)* (Moscow, 1981), 98–109.

⁵ K. Tótev, “Pechat na Sevast Georgi Glava,” *Numismatica* 4 (1982): 15–16. The other seals are unpublished.

⁶ *Istoriia na Veliko Tŭrnovo v tri toma*, ed. P. Petrov (Sofia, 1986), 70–77.

⁷ *Nicetae Choniatae Historia*, ed. J. L. van Dieten (Berlin–New York, 1975), 470.



1. Topographic plan of Tŭrnovo, 13th–14th centuries



2. Tŭrnovo, the hill of Tsarevets



3. Tsarevets, northwest slope with market street

riod, that is, from the late eleventh and early twelfth centuries, when there is evidence of the manufacturing of iron, copper, and glass and of the production of ceramics for everyday use. Kilns and blacksmiths' workshops, copper-smelting kilns, and units producing kitchenware, domestic ceramics, and building ceramics began to operate along the terraces beside the Yantra River on Tsarevets and Momina krepost at least twenty to thirty years before 1186. At the foot of Momina krepost was the residential district, and the buildings excavated there have yielded furnaces and fireplaces for the smelting of iron as well as kilns for ordinary earthenware, all dated to the second half of the twelfth century.⁸ The total number of Komnenian coins of the period from 1081 to 1186 (417) is evidence of the growth of Tŭrnovo as a typical urban center on the Byzantine pattern during the twelfth century.

With the restoration of the Bulgarian kingdom in 1186, Tŭrnovo was declared the capital of the state. It was the center of political, religious, and administrative power. The tsar's palace and the complex of patriarchal buildings were built as independent inner fortresses on Tsarevets. The proclamation of Tŭrnovo as the capital fostered its growth in terms of population and its emergence as a major center of production and trade. According to archaeological finds, the population of the town was 5,000–10,000 in the early thirteenth century and rose to 15,000–20,000 during the fourteenth century. Most of these people seem to have been engaged in craft production and trade. More than fifty crafts are known from written sources and have been confirmed by archaeological evidence. Some of the inhabitants, outside the castle, may have been involved in animal husbandry.

The extraction of iron ore and iron manufacturing were the most important activities during the period in question, and they provided the materials for all the other crafts. Before the construction of the monastery of the Forty Holy Martyrs (by the Yantra River) in the second half of the twelfth century, large quantities of iron ore were extracted and processed in the area. Eight furnaces with dimensions of 1×2 m were found dug into the ground, along with pieces of ore and charcoal. Some 3,000 kg of iron pieces mixed with slag have been gathered from around the furnaces.⁹ After 1230, this activity continued near the monastery. Several blacksmiths' workshops were built to manufacture agricultural implements, knives, nails, and other articles. Similar workshops have been found on Tsarevets and Momina krepost, where some 2,000 kg of raw iron pieces have been collected. The blacksmiths of Tŭrnovo manufactured more than one hundred types of articles, including tools (30), objects in a folk style (15), building details (10), and weapons (20).

A center for the production of large quantities of copper ore and ingots has been found in the southeast section of Tsarevets. Several workshops have come to light, containing the remains of fireplaces and furnaces, a thick layer of slag mixed with

⁸ Y. Nikolova, "De l'organisation urbaine du Tarnovgrad médiévale," *Travaux de l'université "Cyrille et Methode" de V. Tŭrnovo* 15 (1979): 95 ff.

⁹ A. Popov, "Metalurgichno proizvodstvo v Tŭrnovgrad (XII–XIV v.)," *Sbornik v pамет na Prof. Stancho Vaklinov*, ed. D. Angelov (Sofia, 1984), 204–7.

small ingots of copper, and about 40,000 sherds of clay pots to which copper was adhering. The volume of these clay pots was 100–1,600 ml.¹⁰ Numerous fragments of copper plates and concave copper plates have also been found. Copper flans were probably manufactured as well, before being struck in the town mint. This complex of copper manufacturing dates from the second half of the twelfth century or the first half of the thirteenth. Similar small pots for smelting bronze and copper have also been found in the residential districts along the Yantra River.

The production of building ceramics was highly developed because of the number of churches and imposing residential buildings constructed. Bricks were manufactured in great quantities for the construction and decoration of facades. The brick workshops were located by the Yantra River, where there is plenty of fictile clay and water. Such a workshop, with a well-preserved kiln, measuring 3 × 3 m, has been found near the church of St. Dimitar.

Ceramics have survived in great quantity and variety. They have been provisionally divided into two broad groups: kitchenware and tableware ceramics. The kitchenware ceramics consist of various pots, jugs, earthenware jugs, cups, and candlesticks. Tableware of the sgraffito type is in the tradition of Byzantine ceramics. The table utensils are decorated with complex geometrical and plant motifs, with depictions of various animals (including doves, eagles, lions, and dogs) and mythical creatures (griffins and dragons). Pottery workshops and kilns have been found on Tsarevets, Momina krepost, and, in particular, by the Yantra River.¹¹ In the manufacturing of clay utensils, the potters of Tŭrnovo created their own decorative and morphological style, producing work of high artistic value that had a considerable influence on ceramics all over the country.

The quarrying and dressing of stone was connected with the increased urban building activities. To date, fifty-one churches of the twelfth to fourteenth centuries have been found and preserved. The stone for the buildings was dressed by the masons themselves.

The items manufactured by goldsmiths met the needs of ordinary citizens as well as of the rich. Gold, silver, and alloys were used. Twenty stone molds for the casting of rings, earrings, bracelets, and appliqué items have been found. After casting, these articles were given additional treatment and decorated with complex patterns.¹² Small clay pots, with a volume of 50–100 ml, for gold and silver castings, have been found. They cannot be dated precisely, but generally belong to the period from the twelfth to the fourteenth century.

Glass was produced for everyday purposes and ornamentation. On Tsarevets, near

¹⁰ V. Valov, "Archeologicheski razkopki i prouchvania na krepostnite steni na Tsarevets," *Tsarevgrad Tŭrnov* 5 (1991): 120.

¹¹ S. Georgieva, "La céramique du palais de Carevec," *Tsarevgrad Tŭrnov* 2 (1974): 8–180.

¹² S. Georgieva, "Parures et pièce de tissus du palais de Carevec," *Tsarevgrad Tŭrnov* 2 (1974): 389–415; M. Dolmova, "Zlatařstvo na srednovekovniiia Tŭrnov," *Kulturata na srednovekovniiia Tŭrnov: Nauchna sesiia, posvetena na 800-godishnata ot vŭzstanoviavaneto na bulgarskata dŭrzhava, Veliko Tŭrnovo, oktombri 1985*, ed. A. Popov and V. Velkov (Sofia, 1985), 84ff.

the main gate, a kiln, fragments of pots, and many glass ingots have been found.¹³ Such remains have also come to light near the monastery of the Forty Holy Martyrs. Flat panes of glass, bracelets, glass bottles, and tesserae for mosaics were produced.

Archaeological investigations have revealed the extent of craft industries such as baking, leather manufacturing, the treatment of bone, and weaving. Written sources and archaeological evidence show that in Tŭrnovo the workshops of craftsmen (which in most cases were also their dwellings and probably the shops where the objects were sold) were located in specific districts differentiated by craft. For example, the ironsmiths and potters settled along the Yantra River. In the written sources, the craftsmen of Tŭrnovo are referred to as *technitars* and *chudozniki* (painters).

In the early thirteenth century, the fact that Tŭrnovo was the capital of the state fostered the development of domestic trade. There is written and archaeological evidence of the differentiation of commercial sections and trade districts. One such district, with a market street and shops, is located on the northwest slope of Tsarevets. A baker's shop, and a pottery shop with more than two hundred completely preserved sgraffito utensils, have been discovered. Each district of town had its own market; such markets lay close to the monasteries of the Forty Holy Martyrs and St. Dimitar. There would have been markets and fairs every week and on the great saints' days.

Tŭrnovo traded with Byzantium, of course, which for nearly two hundred years was the main partner of the Bulgarian state, and also with Dubrovnik, Venice, Genoa, Wallachia, Serbia, the Golden Horde, the Arabs, and others. Bulgaria had treaties with some of these states and peoples. The role of foreign tradesmen is indicated by the name of the district in which they lived, still known as the Fortress of the Franks, by the Yantra River.

As for coinage, from 1186 to 1396 the Bulgarian kingdom adopted and used the Byzantine monetary system of the Komnenoi, with the gold hyperpyron as the base unit. After the middle of the thirteenth century, the Byzantine hyperpyron was in use both as an actual means of exchange and as a currency of account. Bulgarian coinage begins to appear in Tŭrnovo in 1257, during the reign of Tsar Konstantin Asen (1257–77), who organized the intensive production of copper coins (3–4 million pieces). In the reign of Tsar Theodore Svetoslav (1300–1322), the minting of silver coins began. The value of Bulgarian silver and copper coins was calculated on the basis of the Byzantine hyperpyron. During the reign of Tsar Ivan Alexander (1331–71), the production of silver and copper coins in Tŭrnovo reached its peak. Some 5–6 million of these silver coins were minted. From the beginning of the thirteenth century until the conquest of Tŭrnovo by the Turks in July 1393, there were considerable numbers of coins in the capital. More than 14,000 coins from the twelfth to the fourteenth century,¹⁴ mostly of Byzantine and Bulgarian origin, have been found (Table 1).

¹³ V. Valov, "Production du verre dans la capitale médiévale bulgare, V. Tŭrnovo de la fin du XII à la fin de XIV s.," *Srednjeevokvno staklo na Balkanu (V–XV v.)* (Belgrade, 1975), 130–33.

¹⁴ Dochev, *Moneti i parichno obrastenie v Tŭrnovo (XII–XIV v.)*, 174–95.

Table 1
Coin Hoards and Single Coin Finds from Tŭrnovo,
Twelfth–Fourteenth Centuries

State, Dynasty, Type of Coin	Hoards	Single Finds	Total
Komnenoi (1143–85)	244	173	417
Angeloi (1185–1203)	4,564	255	4,819
“Bulgarian imitative” (1204–20)	324	601	925
“Latin imitative” (1204–61)	191	2,680	2,871
Laskarids (1208–58)	16	56	74
Thessalonike (1224–46)	20	302	322
Bulgarian coins (1218–56)	3	11	14
Bulgarian coins (1257–1300)	3	529	532
Palaiologoi (1258–82)	3	165	168
Palaiologoi (1282–1356)		811	811
Bulgarian coins (1300–1331)	28	77	105
Bulgarian coins (1331–93)	1,282	1,755	3,037
Epiros (1323–35)	1	120	121
Achaia and Athens (13th/14th century)		6	6
Venice (13th/14th century)		13	13
Serbia (14th century)		8	8
Wallachia (14th century)	10	8	18
Golden Horde (14th century)	6	12	18
TOTAL	6,695	7,582	14,277

Economic and Noneconomic Exchange

Angeliki E. Laiou

The discussion of trade, exchange, markets, and merchants in Byzantium is inscribed in the context of a larger debate regarding the existence and function of these institutions in ancient and medieval societies.¹ The debate has been significantly influenced, indeed in some cases it stems from, the work of anthropologists and sociologists, primarily Karl Polanyi and his school, and Marcel Mauss, whose essay “The Gift” has had a lasting influence. It should be said at the outset that the documentary basis of these works rests on observations of primitive or archaic societies, and is therefore far from transferable *in toto* to the Byzantine economy or to other medieval economies. However, the work of anthropologists, especially economic anthropologists, has presented powerful ideas and established categories and modes of observing society that historians have found useful and have used to good (or less good) effect. Since these works affect primarily the area of trade and exchange (with the concomitant question of mar-

¹ For general bibliography on this section, see K. Polanyi, *The Livelihood of Man*, ed. H. W. Pearson (New York, 1977); K. Polanyi, “Ports of Trade in Early Societies,” *Journal of Economic History* 23 (1963): 30–45; K. Polanyi, C. M. Arensberg, and H. W. Pearson, eds., *Trade and Market in the Early Empires: Economies in History and Theory* (Glencoe, Ill., 1957); G. Dalton, “Economic Theory and Primitive Society,” *American Anthropologist* 63 (1961): 1–25; R. M. Adams, “Anthropological Perspectives on Ancient Trade,” *Current Anthropology* 15 (1974): 239–58; N. J. Smelser, “A Comparative View of Exchange Systems,” *Economic Development and Cultural Change* 7 (1959): 173–82; S. Cook, “The Obsolete ‘Anti-Market’ Mentality: A Critique of the Substantive Approach to Economic Anthropology,” *American Anthropologist* 68 (1966): 323–45; S. C. Humphreys, “History, Economics and Anthropology: The Work of Karl Polanyi,” *History and Theory* 8 (1969): 165–212; M. Mauss, “Essai sur le don” (1923–24), repr. in idem, *Sociologie et anthropologie* (Paris, 1960); R. Tomber, “Quantitative Approaches to the Investigation of Long-Distance Trade,” *JRA* 6 (1993): 142–66; K. Hopkins, “Taxes and Trade in the Roman Empire (200 B.C.–A.D. 400),” *JRS* 70 (1980): 101–25; *Trade in the Ancient Economy*, ed. P. Garnsey, K. Hopkins, and C. R. Whittaker (London, 1983), esp. H. W. Pleket, “Urban Elites and Business in the Greek Part of the Roman Empire,” in *ibid.*, 131–44; C. R. Whittaker, “Late Roman Trade and Traders,” in *ibid.*, 163–80; C. Mossé, “The ‘World of the *Emporium*’ in the Private Speeches of Demosthenes,” in *ibid.*, 53–63; P. Garnsey, “Grain for Rome,” in *ibid.*, 118–30; P. Grierson, “Commerce in the Dark Ages: A Critique of the Evidence” (1959), in idem, *Dark Age Numismatics* (London, 1979), art. 2; R. Hodges, *Dark Age Economics: The Origins of Towns and Trade, A. D. 600–1000* (New York, 1982); E. Patlagean, “Byzance et les marchés du grand commerce, vers 830–vers 1030: Entre Pirenne et Polanyi,” in *Mercati e mercanti nell’alto medioevo: L’area Euroasiatica e l’area mediterranea*, 2 vols. (Spoleto, 1993), 2:586–632.

kets, merchants, and money), it may be useful to present some of the parameters of the discussion here.

The first important contribution of K. Polanyi and his school is the differentiation between, on the one hand, modern market economies that, according to these scholars, function independently of noneconomic social institutions such as kinship or political and religious systems, and, on the other hand, primitive or archaic societies where the economy is “embedded” in social relations. This idea may, at the time, have been novel to formal economics, but it does not surprise either the students of political economy or the historians of ancient and medieval societies. To the latter, what is pertinent, and immediately useful, is the proposition that what may look like market activities in some societies are actions devolving from rights and obligations that are socially determined and dependent on the preservation of status rather than on the profit motive.

In Polanyi’s analysis, the axiom from which all others stem is the distinction between transactions of goods and services and market exchange, the latter of which he simply called “exchange.” He spoke of three different forms of integration in various economies, connected to three distinct types of trade. The first form of integration is reciprocity, which is the movement of goods and services induced by social obligation; this usually takes the form of gifts and counter gifts, is the dominant characteristic of tribal societies, but survives in archaic societies where much of foreign trade is based on it. The movement of goods involved here is called “gift trade” and consists primarily of élite items. The second form of integration is what Polanyi called “redistribution,” that is, the collection of goods and services (or of rights to goods and services) to a center, which then reallocates them to its subordinates, collectively or individually. The corresponding form of trade is administered trade, in which the government controls important elements, such as weights and measures, rates, credits, personnel. The third form of integration is what Polanyi called “exchange,” that is, a two-way movement of goods between people, each of whom seeks to derive profit. This involves the existence of market trade, with the market functioning as a self-regulating mechanism on the principles of supply and demand. This last form of integration, always according to Polanyi, reached its apogee in nineteenth-century Europe and North America and was also present in some other societies; his strong warning is that the analytical categories created by economists to describe the mechanisms of modern market economies are not pertinent to or appropriate for describing the functioning of any other economies that are not based on market exchange.²

The concept of “port of trade” was developed by Polanyi in conjunction with the development of trade, especially overseas trade, before the establishment of markets. According to Polanyi, what characterizes a “port of trade” situation is that products are exchanged in a location that is neutral and provides safety to the natives and to the outsiders. The neutrality is guaranteed by state authority, which also provides amenities, for example mediation mechanisms. This definition of “port of trade” includes

² Polanyi, *Livelihood of Man*, 35ff and 93–96.

the idea that the terms of trade (price, for example), are set by administrative action, although other things, such as the quality of the merchandise, may be the object of bargaining. Since there is no bargaining on the price, and no competition, there is no free market mechanism at work.³

These ideas were not accepted even by anthropologists without criticism, which served to refine them. Most important in terms of terminology is the notion of “exchange,” and, in its use by Polanyi, it is also highly problematic. It was pointed out by scholars that all three mechanisms of integration described by Polanyi involve exchange of some kind, and one scholar suggested that instead of “exchange” the third concept should be called “self-regulating market,” certainly an important point, which seems to have been accepted, consciously or not, by some members of Polanyi’s school.⁴ A corollary is that Polanyi’s three integrative systems describe not economies but systems of exchange. N.J. Smelser also proposed a fourth category of integration, which he called “mobilizative,” to take into account the collection of goods and services into the hands of those (such as a government) capable of pursuing the broad political aims of society. “Administered” trade, that is, trade whose rules and aims are regulated by government, is considered by Smelser to belong to the “mobilizative” rather than to the “redistributive” category. These refinements, a matter of internal debate among anthropologists, do have important implications and corollaries, which can be useful to us here. It seems useful to talk of “economic exchange” when describing exchanges that involve the marketplace and the supply-and-demand mechanism, and “noneconomic exchange” to describe exchanges where the economic factors of supply and demand do not play an important role; hence the title of this chapter.

While it is impossible and unnecessary to discuss here the further implications of the debate among anthropologists, the resulting division of scholars (historians as well as anthropologists) on matters connected with trade and exchange is important. The “substantivist” or “primitivist” group of scholars (i.e., those who, following Polanyi, define the economy as “an instituted process of interaction serving the satisfaction of material wants”),⁵ rejects the economists’ assumption that scarcity is a general basis for economic activity. Therefore, the definition of “economic” as the process of maximizing gain is also rejected as a universal definition. If men do not engage in economic activities for profit (or, not only for profit), they may do so certainly for subsistence but also in order to gain or preserve status, or because of custom and tradition, or to serve the needs of a collective authority. Indeed, “primitivists” see the role of the collective authority (the state) as paramount in establishing laws and provisions that make eco-

³ Polanyi, “Ports of Trade.” For more recent discussions of exchange by anthropologists, see J. Sabloff and C. C. Lamberg-Karlovsky, ed., *Ancient Civilization and Trade* (Albuquerque, 1975), esp. the article by Colin Renfrew, “Trade as Action at a Distance: Questions of Integration and Communication,” 3–59. On these matters, cf. G. Dagron, “The Urban Economy, Seventh–Twelfth Centuries,” *EHB* 396.

⁴ Smelser, “Exchange Systems,” 178. Cf. the preface to Polanyi, *Livelihood of Man*, xxxi, where the editor, H. W. Pearson, talks of the ways Polanyi analyses “exchanges.”

⁵ Polanyi, *Livelihood of Man*, 31ff.

conomic transactions “gainless” and therefore acceptable: the doctrine of the “just price” is invoked in this respect.

As far as trade and exchange are concerned, the most important contributions of the “primitivist” school may be considered to be the idea that exchange takes many forms, not only that involving the self-regulating market; the notion that the profit motive is not always paramount; and the differentiation drawn between long-distance and local trade in terms of their purpose, function, and structure. A further important distinction has to do with the social position and economic motivation of those who engage in trade: to put it briefly, the operation of trade does not always imply the existence of markets, nor does it necessarily imply the presence of merchants.

Polanyi’s theories have been further criticized in detail by specialists in the fields that they were, in the first instance, developed to interpret. Historians and archaeologists of the ancient and medieval periods, on the other hand, have sometimes overused his theories.⁶ At the same time, many historians of ancient and medieval economies have developed both theoretical statements and empirical studies that incorporate (or reject, in informed debate) these or similar ideas and have greatly enriched our understanding of economic phenomena. Thus the distribution of goods through gifts, although not unnoticed by traditional historians, has been studied from a new viewpoint. The exchange of gifts between individuals is certainly an economic phenomenon, either because the value of the gift is sometimes considerable or because the gift places the receiver under an obligation, the discharge of which involves a recognizable economic activity.⁷ The fact that a gift may have a value that surpasses its market value, however, is also clear.⁸ As for gifts between states, whether they are voluntary or a form of tribute or reward for alliance, they can, as we shall see, involve sums of substantial magnitude. Our understanding of the gift exchange owes a good deal to the seminal work of the anthropologist Marcel Mauss, written long before Polanyi’s studies. He stressed, among other things, the socially obligatory nature of gift and counter-gift, where the obligation to give, to receive, and to return the gift follows specific norms. He identified gift giving (which involves luxuries primarily) as an activity that has economic aspects, that may encompass ideas that we recognize as those of credit, sale, loan, but that is not based on any notion of “economic” exchange in the sense used by formal economics. Indeed, sometimes the gift exchange may lead to great expenditures without visible economic gain. In any case, the purpose of gift exchange is tied not to economic profit but rather to status and honor and to the establishment or preservation of hierarchies.⁹

⁶ See A. J. H. Latham, review of R. Hodges, *Primitive and Peasant Markets*, in *Economic History Review*, 2d ser., 42 (1989): 299–300. It should also be noted that some highly sophisticated studies of ancient and medieval trade have been written in the wake of the debate. See, e.g., L. de Ligt, *Fairs and Markets in the Roman Empire* (Amsterdam, 1993).

⁷ For Byzantium, see Kekaumenos on merchants who take a landlord to dinner in order to persuade him to lend them money: *Sovety i rasskazy Kekavmena*, ed. G. G. Litavrin (Moscow, 1972), 212–14.

⁸ For Byzantium, see the value placed on the gift of used clothing made by the emperor to officials.

⁹ One must mention, in this connection, the highly influential work of M. I. Finley, esp. *The Ancient Economy* (Berkeley, 1973) and *Economy and Society in Ancient Greece*, ed. B. D. Shaw and R. P. Seller (New York, 1981).

The existence and extent of market and nonmarket exchange in ancient and medieval societies is very much a question that engages current scholarship. As H. Pirenne put it a long time ago, the question at issue is not the existence of trade and commerce but rather their scale and nature.¹⁰ The reverse statement might be that it is not the existence of nonmarket exchange that is any longer at issue, but rather the applicability of the concept to particular historical societies and the extent and function of nonmarket elements in the economy. The late Roman Empire has been a particularly fertile ground for debate, partly because the distributive role of the government was manifestly great, although neither the implications nor the limits of this statement are easy to determine, and partly because there is a relative abundance of sources, very much including archaeological ones. For late Roman society, there are questions regarding the extent of local, interregional, and long-distance trade, noncommercial exchange, gift exchange, and the concomitant question of whether the merchants were independent entrepreneurs (*mercatores*, in Polanyi's terminology) or agents of the state or great landlords (*factores*, in Polanyi's terminology). Insofar as nonmarket exchange is concerned, Roman historians have pointed to the role of the state in the grain trade, surely the most important commodity traded in the ancient and medieval worlds. While the extent of state intervention remains a matter of debate, it seems that during the imperial period the production of grain on imperial estates increased, while at the same time there was also increased control of the grain supplied through taxes in kind, requisition, and state purchase.¹¹ It could be argued that even the activities of the *negotiatores* and *navicularii*, even if they were men of means, were greatly and positively influenced by the state, which gave them immunity from liturgies.

The role of the state, indeed, is manifold, and much of the debate has focused on it. The state, in the Roman Empire as in the Byzantine Empire, intervened decisively in three respects: by levying taxes, by providing services (primarily through maintaining an army), and by issuing coinage. In a speculative but well-argued article, Keith Hopkins has suggested that the Roman state had an important positive effect on the volume of trade in the period 200 B.C.–400 A.D. because of the imposition of taxes in cash. This effect would have operated in both local transactions and interregional and long-distance trade. Locally, the peasants would have had to exchange some of their produce to pay their taxes (and rents) in cash, and this would have stimulated both trade and productivity. At the same time, tax money given to the army increased its purchasing capacity and stimulated local trade. Interregional and long-distance trade would have been stimulated by the flow of tax money and, I suppose, by increased purchasing power. Similarly, the money supply increased, and monetization occurred through the medium of taxes and tax-stimulated trade. Although Hopkins introduces many qualifications in the argument, and although he suggests that the money economy was a thin veneer in the Roman Empire, involving a small segment of the economy, the argument regarding the effect of taxes in cash on the economy of exchange is worth re-

¹⁰ H. Pirenne, *Mahomet et Charlemagne*, 2d ed. (Paris, 1937), 219, quoted in Whittaker, "Late Roman Trade," 163.

¹¹ Garnsey, "Grain for Rome," 118–30.

taining for our discussion of the Byzantine economy, especially for the period after which the land tax was collected in cash. Following Hopkins' argument, the effects would be greater commercialization of production, development of both local and long-distance trade, and division of labor, with concomitant urbanization. Worth retaining also is the comment that in the Roman period monetization of taxation had its greatest effects on parts of the empire that had, until then, paid their taxes in kind—in terms of the Byzantine economy, a case in point would be the imposition of taxes in cash on the Bulgarians in the early eleventh century, which led to rebellion.¹²

An interesting approach to the question of nonmarket exchange was offered by C. R. Whittaker. It is useful primarily because of the concepts developed, even if one does not agree with the conclusions drawn from the analysis. In seeking the precedents of early medieval economy in the late Roman Empire, Whittaker talks of "tied trade," that is, exchange that is controlled by a number of different centers of authority and economic power, outside the market. One such is the emperor and his court, that is, the state, controlling long-distance trade at ports of entry through the *comites commerciorum*. The manufacturing of controlled commodities, such as cloth and weapons, was also the prerogative of the state; traders attached to the court received tax exemptions (this is what Polanyi would include under "administered" trade). A second institution connected with tied trade was the church; Whittaker points to both the transfer of commodities among the various estates of the church and the commercialization of production, which, however, was carried out not by free-enterprise entrepreneurs but by agents. Tax exemptions given to the church for trade and for its shops afforded it a protection not available to the merchant. Similar arguments are adduced for "tied trade" connected to the landowners, who could get tax exemptions, exchanged the products of their own estates, and sold some of them through tied agents rather than merchants, agents who profited from the tax exemptions. If Whittaker is correct, it would follow that the functioning of a market in the modern sense of the word (i.e., a self-regulating mechanism where prices find their level through the interplay of supply and demand) was limited by the intervention of institutions that either bypassed the market or functioned within it but in advantageous conditions that skewed it or (depending on the importance one attaches to "tied trade") made it dysfunctional. It also would probably, but not necessarily, follow that the role of the entrepreneurial merchant, as opposed to that of the agent, was limited.¹³ To Whittaker's argument, A. Carandini has objected, I think correctly, that the sale of products by aristocrats, through their agents, is very much a part of the market.¹⁴ In any case, what is important to us

¹² Hopkins, "Taxes and Trade."

¹³ Much of the above is summarized from Whittaker, "Late Roman Trade." Within the nonmarket exchange, one has to subsume the direct distribution of goods from producer to consumer. Charity would fall into this category, as would the free distribution of bread to the population of Rome and to that of Constantinople until 618.

¹⁴ A. Carandini, "Il mondo della tarda antichità visto attraverso le merci," in *Società romana e impero tardoantico*, vol. 3, *Le merci, gli insediamenti*, ed. A. Giardina (Rome, 1986), 14–15.

here is not so much the conclusions, as the concept of “tied trade,” which has relevance to Byzantium as it does to other societies.

This type of circulation of goods, from producer to consumer, or the circulation of commodities within the estates of the same great landlord, has been used to explain puzzling phenomena of the movement of goods in the late Roman Empire. For example, the large quantity of pottery from Africa that has been found in Italy and southern Gaul, as well as the presence of garum and oil from Africa in Gaul and Spain, perfectly capable of producing their own, has been explained as the result of internal exchange between estates, whether these belonged to the emperor or to other great landlords.¹⁵ That idea, which makes social exchange and noneconomic profit a principal motive factor in the economy of exchange, is less persuasive than Chris Wickham’s alternative explanation of the rise and decline of the African amphora. His interpretation ingeniously connects state enterprise and private profit. He argues that the ships involved in the transportation of the *annona* reduced the marginal costs of transport for other commodities not controlled by the state, such as oil and pottery. Such products were pushed into interregional trade as a by-product of the needs of the state and gave Africa a commercial advantage; hence the rise of the African amphora. Its decline would be due to the Vandal conquest of Africa, which pushed Rome toward alternative grain-supplying areas, while at the same time lower demand for grain caused marginal costs to rise.¹⁶ In other words, the *annona* and other state requisitions permitted profitable *private* transactions, with economies effected precisely through the organization of state transports. This interpretation brings us back to economic profit as an important factor in the late Roman economy of exchange.

Market exchange, or market trade, is the type of exchange most familiar to modern societies, and it is the one that modern economic analysis was in the first instance developed to investigate and interpret. The market is the place where buyers and sellers meet and prices are formed through *impersonal* mechanisms: the lowest priced supply and the highest priced demand. Historians who believe in the importance of the market, and of commerce, in ancient, medieval, or early modern societies (i.e., the “modernists”) willingly acknowledge the fact that there may be price regulation by nonmarket authorities, without, however, accepting that this eliminates the effects of supply and demand and of competition.¹⁷ They also recognize the role of the state,

¹⁵ Whittaker, “Late Roman Trade,” 176–78.

¹⁶ C. Wickham, “Marx, Sherlock Holmes and Late Roman Commerce,” in *Land and Power* (London, 1994), 92ff. Cf. Carandini, “Il mondo,” 15, 18.

¹⁷ F. Braudel, *Civilisation matérielle, économie et capitalisme, XVe–XVIIIe siècle*, vol. 2, *Les jeux de l’échange* (Paris, 1979), 194–95, quoted by Carandini, “Il mondo,” 11–13; for what follows, see also Wickham, “Marx.” It is a rare economist these days who believes in a “perfect” market, where the prices are formed purely and solely by untrammelled economic processes, without the intervention of the state or international agencies or monopolists. Once again, then, the question of degree becomes important, as do historical complexities that have always defied pure theory. Some scholars would argue that political interference in demand, costs, and prices destroys the self-regulating market. See, e.g., W. Neale, “The Market in Theory and History,” in Polanyi, Arensberg, and Pearson, *Trade and Market*, 357ff.

whether in price fixing or in taking a portion of production outside the market, as well as the role of autoconsumption, which may affect a lesser or greater part of the economy. At the same time, unlike the “primitivists,” they believe that a market economy, and commerce with it, existed since antiquity and that commercial exchange is the most important aspect of exchange, even if it forms a relatively small part of what today we would call the gross national product.¹⁸ That is to say, in my view, that commerce, although it may be a relatively thin layer of the economy, is dynamic enough to influence other developments, namely, productivity, production, and urbanization.

Thus an eminent school of students of the late Roman economy would explain the diffusion of products throughout the Mediterranean, especially during the period from the third century to the first half of the fifth century, not by exchange between estates of the same landlord, and not by the role of the state as tax collector and redistributor of goods, but rather by commercialization of production and the existence of a trade system in the Mediterranean and to some degree in the hinterland of the Roman Empire. The prevalence of products and pottery from North Africa in this period is explained by modernists in the same way. It is, in fact, argued that only market relationships can explain the diffusion of commodities in the countryside and the cities and the trade in mass-produced items or in commodities for mass consumption.¹⁹

The few examples from the economic history of the Roman Empire, used above, have been chosen to illustrate the very real differences between the modernists who believe in the functioning of a market economy in preindustrial societies and the primitivists who do not. Given the fact that virtually all scholars agree that there are segments of the economy that escape market mechanisms, the differences nevertheless are not simply a matter of degree (whether that segment is 90% or 70% or whatever of the economy), but rather a matter of the very nature of the economy. The first question is whether there exists a sector of the economy that is affected primarily by market mechanisms and economic incentives as opposed to political, social, or administrative concerns. The subsequent question is the extent and significance of such a sector. The third question is whether such a sector can play an integrating role in the economy and the society.

Similar issues arise regarding the existence and role of merchants, since different kinds of exchange call for different personnel, if one may put it that way. A merchant may be defined as a professional middleman, who makes his living primarily from trade. Markets can certainly exist without merchants of any kind. In exchange between states, or within aristocratic estates, professionals may exist whose job is to carry out this trade, but they need not be middlemen; they can be agents, “factores” in Polanyi’s terminology, and their rewards can indeed lie outside market profit, being closer to

¹⁸ See Giardina, *Società romana*, esp. the articles by Carandini “Il Mondo,” and C. Panella, “Per lo studio dei contesti e delle merci tardoantiche.” Unfortunately, R. W. Goldsmith (“An Estimate of the Size and Structure of the National Product of the Early Roman Empire,” *Review of Income and Wealth* 18 [1984]: 263–88) does not take a position on the question of the percentage of commercial exchange in the national product.

¹⁹ See Giardina, *Società romana*, esp. Carandini, “Il mondo,” 13ff.

salaries. Where the exchange is based on barter, the role of the middleman is limited, since such exchanges are often, though not always, carried out between producers. The merchant as middleman can exist in circumstances where trade is highly regulated, where his activities are strictly supervised and the rate of his profit mandated. The merchant-entrepreneur is linked to commercial exchange, that is, to an exchange economy based on supply and demand, and where his profits are made through the mechanism of buying cheap and selling dear. To that extent, the question regarding the commercialization of an economy is also a question of the existence of merchants and the conditions under which they function.

The Byzantine Economy of Exchange

This general discussion is meant as an introduction to some of the historiographical and conceptual problems regarding the Byzantine economy of exchange. The relevance lies not only in the self-evident fact that the Byzantine economy was, indeed, a preindustrial one, which by definition invites the large question of whether one may speak of a truly commercialized sector. Put differently, this is the question of how much importance one may assign to self-sufficiency. Besides this trite statement, there are the realities and specificities of the Byzantine state and its social and economic structures. On the one hand, there is the reality of the state that, much more and for a longer time than in medieval Europe (although with different effect at different times), collected revenues through taxes and customs dues and “mobilized” some of them to collective, that is, political purpose. It maintained an army, which drew salaries and (depending on the period) obtained most or some of its sustenance through the cultivation of land tied to military service. It also maintained an expensive bureaucracy. The state had control of coinage, a factor of major importance in an economy that certainly knew credit, but equally certainly not to a degree parallel to that of, for example, late thirteenth- or fourteenth-century Italy; whether coinage was issued to respond to economic necessities or for essentially political reasons has been a matter of debate. The state also legislated interest rates, although again it may be argued that at certain times (in the 11th century and after) these fluctuated according to demand for capital or for consumption credit. The state requisitioned services for the army and in return gave (at least in theory) protection for its subjects to carry out their productive activities. While the state did not regulate most prices, it did legislate the rate of profit, at least in Constantinople of the ninth to tenth centuries, and had a whole set of prohibitions on the trade of certain items pertinent to its security or prestige. The state, finally, had its own domains, the production of which was arguably (but debatably) outside the market. There is thus an important element of state intervention, which is inescapable and must be taken into account in any discussion of the economy of exchange.

Similarly, there were large estates in the period through the sixth century and again after the ninth; we have spectacular cases of estate production, for example, the production of carpets and fine textiles on the estates of the ninth-century potentate, the

widow Danelis.²⁰ The question must arise whether estate production was for the market or for internal consumption and redistribution. If the market was involved at any stage, how were the products marketed—through agents or middlemen?

On the other hand, there are phenomena that argue for the existence of a commercial sector and a market economy in the Byzantine Empire. There is, after all, an urban life, dim in the period from the seventh through the ninth century, more active later. There is evidence of transactions in cash, continuously since at least the ninth century.²¹ Money was always issued, although the number of coins, as well as their circulation, fluctuated. Lending at interest remained legal except for a brief period of time, and merchants, in the true sense of middlemen, are visible throughout the period, complete with trade associations, markets, and fairs.²² Besides, since the land tax was paid in cash after 769,²³ small-scale, local exchanges must necessarily be assumed. At the other end of the spectrum, trade treaties testify to the existence of long-distance, foreign trade of some kind. Some of it was closely controlled by the state, but not all of it was, nor were prices controlled.

In grappling with these issues, historians of the Byzantine economy have given divergent answers, broadly divisible into two categories: those who ascribe a preponderant role to nonmarket factors, and those who stress the existence of markets, merchants, and, generally speaking, economic factors in exchange or in the segment of the economy connected with exchange. While it is not pertinent to rehearse here all of the debates, a few salient examples may be given; it should be kept in mind, in what follows, that there are significant differences and subtleties in the argumentation of scholars who share a similar viewpoint, but these necessarily are suppressed here, so that the general lines may emerge.

According to one school of thought, the Byzantine economy was for a very long period dominated by factors that can be termed noneconomic, in the sense that the primary agent was the state, which collected the surplus in the form of taxes and redistributed it to the army and the civil administration. In this schema, trade was very limited.²⁴ The cities are considered to have been centers of consumption rather than of production, the economy was marked by a very low degree of monetization, and money fulfilled the needs of the state, being distributed in a “noneconomic” pattern.²⁵

²⁰ *Theophanes Continuatus*, ed. I. Bekker (Bonn, 1838), 318–19.

²¹ N. Oikonomides, “Σέ ποιά βαθμό ήταν εκχρηματισμένη η βυζαντινή οικονομία,” *Ροδωνιά* (Rethymnon, 1994): 363–70.

²² For the middle Byzantine period, see A. E. Laiou, “Händler und Kaufleute auf dem Jahrmarkt,” in *Fest und Alltag in Byzanz*, ed. G. Prinzing and D. Simon (Munich, 1990), 53–70; and eadem, “God and Mammon: Credit, Trade, Profit, and the Canonists,” in *Byzantium in the Twelfth Century*, ed. N. Oikonomides (Athens, 1991), 261–300.

²³ See N. Oikonomides, “The Role of the Byzantine State in the Economy,” *EHB* 981.

²⁴ An early proponent of that view was A. H. M. Jones (*The Later Roman Empire, 284–602: A Social and Administrative Survey*, 2 vols. [Norman, Okla., 1964]), who gave a very low estimate of the yield of duties on trade. *Ibid.*, 1:464–65, 2:872. For a critique of the basis of his estimates, see C. Morrisson, “Monnaie et finance dans l'Empire byzantin, Xe, XIVe siècle,” in *Hommes et richesses dans l'Empire byzantin*, 2 vols. (Paris, 1989–91), 2:297–98 and addendum to 297.

²⁵ Among the most important proponents of these views are M. F. Hendy (see, e.g., his *Studies in the Byzantine Monetary Economy c. 300–1450* [Cambridge, 1985], 4ff and *passim*; “From Antiquity to the

In this perspective, which accepts politics as the integrative factor and gives it a role of virtual monopoly, the Byzantine economy, specifically the sector connected with exchange, is considered to be different *in kind* from modern economies, so that the analytical tools that have been developed to study the workings of the latter may not and must not be applied to the former.

Other historians see things differently and ascribe to trade, commerce, the market, and the activities of merchants considerable importance, even in the period of profound military and political troubles and economic decline, that is, the seventh to eighth centuries. In the period of expansion (10th–12th centuries) it has been suggested that the nonagricultural sector produced at least 15–20% of the monetized national product, perhaps more. I think it may be argued that in the twelfth century this proportion was greater, perhaps over 40%.²⁶ This view accommodates a commercialized sector of the economy, a relatively high ratio of monetization (ca. 46% in the areas and periods of greatest monetization)²⁷ and an economic use of money, all, of course, varying in aspect and importance during the long history of the Byzantine Empire. Most importantly, scholars who espouse this view of the economy of exchange accept that basic economic factors present in modern economies—supply and demand, market mechanisms, the profit motive, even Fisher's equation—are indeed useful in understanding the articulation of the Byzantine economy of exchange, that is, that the difference between it and modern commercial economies was one of degree rather than of kind.²⁸ The argument, it should be stressed, is that economic laws apply specifically to the monetized sectors of the economy.

Given such differences of opinion, it is a matter of some importance to distinguish between noneconomic exchange and commercial exchange, and not to confuse the indicators of one for evidence of the other. That is not in the least meant to negate the

Middle Ages: Economic and Monetary Aspects of the Transition,” in *De la Antigüedad al medievo (Siglos IV–VIII), III Congreso de Estudios Medievales* [León, 1991], 323–60, and “Economy and State in Late Rome and Early Byzantium: An Introduction,” in *The Economy, Fiscal Administration and Coinage of Byzantium* [Northampton, 1989], art. 1), and J. Haldon (see, e.g., his *Byzantium in the Seventh Century* [Cambridge, 1990], 117ff). Recently, the discussion has been presented with explicit connection to the theories of Polanyi, in particular the distinction he drew between long-distance, foreign trade and domestic trade, the former being administered trade, carried out through the institution of port of trade, and chronologically preceding the latter: Patlagean, “Byzance et les marchés du grand commerce.”

²⁶ Morrisson, “Monnaie et finances,” 297–98. Cf. A. E. Laiou, “Exchange and Trade, Seventh–Twelfth Centuries,” *EHB* 745–46.

²⁷ See the simple national accounting model in A. E. Laiou, “The Byzantine Economy: An Overview,” *EHB* 1154–55.

²⁸ In this category one may include R. S. Lopez (“The Role of Trade in the Economic Readjustment of Byzantium in the Seventh Century,” *DOP* 13 [1959]: 67–85); N. Oikonomides (“Silk Trade and Production in Byzantium from the Sixth to the Ninth Century: The Seals of Kommerkiarioi,” *DOP* 40 [1986]: 33–53; idem, “Le marchand byzantin des provinces [IXe–XIe s.], in *Mercati e mercanti* [as above, note 1], 633–60); Laiou (“Händler und Kaufleute” and “Byzantium and the Commercial Revolution,” in *Europa medievale e mondo bizantino*, ed. G. Arnaldi and G. Cavallo [Rome, 1995]); and Morrisson (“Monnaie et finances,” and “La dévaluation de la monnaie byzantine au XIe siècle: Essai d'interprétation,” art. 9 in *Monnaie et finances à Byzance: Analyses, techniques* [Aldershot, 1994]), among others. It remains true here also that significant differences in detail exist in the work of scholars who share this general viewpoint.

possibility of the existence of market mechanisms in the Byzantine economy; it does point up the necessity of clear definitions and differentiations. This aspect of the history of medieval economies generally was powerfully brought forth in an article by Philip Grierson published in 1959.²⁹ In this work, Grierson cautioned generally and negatively against confusing trade and distribution, especially against treating the evidence of the distribution of luxury goods and money as necessarily evidence of commercial activity. He argued specifically and positively that goods and money change hands not only through commerce but also through other means, such as “theft” (e.g., plunder) and gifts, whether voluntary or coerced (e.g., for the ransom of captives). This distinction remains basic and is certainly relevant to the Byzantine Empire. The sums involved, whether for political payments (e.g., to achieve peace) or for gifts, were sometimes large enough to have economic significance. On the other side, on the side of revenues, war booty could be enormous and, again, have economic significance.³⁰

Political payments, ransom, and gifts occurred throughout the Byzantine period. For example, in 768, Constantine V sent 2,500 silk garments to the Slavs to ransom prisoners taken on the Greek islands, while some years later his daughter-in-law, Empress Irene, paid Harun al-Rashid almost 140,000 gold coins a year for seven years.³¹ In the eleventh century, the Rus’ bargained with Constantine IX, offering peace against a price of 3 pounds of gold per head for their entire army.³² Gifts and coerced gifts are sometimes hard to distinguish. When Krum offered peace against “large sums of gold and garments, and a certain quantity of choice maidens,” no one could confuse this with a gift.³³ On the other hand, the relatively large number of gifts exchanged between the Byzantine emperors and Muslim rulers bears every trait of the ritualized gift and countergift envisioned by Mauss, while at the same time it clearly serves to buy or preserve peace, and is therefore to be considered as a free gift only with that qualification in mind.³⁴ The philosophy behind gift and countergift, which was certainly political rather than economic, is stated by the Arabic source, describing al-Mamun’s reaction to a gift sent him by Emperor Theophilos: “Send him a gift a hundred times as much as his, so that he recognizes the glory of Islam and the grace which

²⁹ Grierson, “Commerce in the Dark Ages.”

³⁰ With regard to political payments and gifts, Grierson gives some figures, primarily from the early Byzantine period, among which one may note the annual tribute to the Huns, from ca. 430 to the accession of Marcian in 450, which added up to 350 pounds of gold in 430, doubled in 435, a lump sum payment of 6,000 lbs. in 443, and a subsequent annual payment of 2,100 pounds. He also mentions Justinian’s total payments to a Persian ambassador (1,000 lbs. of gold), and Constantine VII’s gift of more than 1,000,000 silver miliaresia to Princess Olga. Ransom payments could be equally large. On gifts and political payments, see also the more complete list given by Hendy, *Studies*, 264–72. Cf. Laiou, “Exchange and Trade.”

³¹ W. T. Treadgold, *The Byzantine State Finances in the Eighth and Ninth Centuries* (New York, 1982), 84: part of the first installment was paid in goats’ wool.

³² *Ioannis Scylitzae, Synopsis historiarum*, ed. H. Thurn (Berlin–New York, 1973), 431.

³³ F. Iadevaia, *Scriptor incertus* (Messina, 1987), 50–51.

³⁴ On these gift exchanges, see Ghada al-Hijjawi al-Qaddūmi, *Book of Gifts and Rarities: Kitāb al-Hadāyā wa al-Tuhaf* (Cambridge, Mass., 1996), paras. 31, 73–74, 82, and the analysis by O. Grabar, “The Shared Culture of Objects,” in *Byzantine Court Culture from 829 to 1204*, ed. H. Maguire (Washington, D.C., 1997), 115–29.

Allah bestowed on us through it." This was done, and then al-Mamun asked: "What do they value most?" They answered: "Musk and sable." Al-Mamun said, "Send them additionally 200 ratl of musk and 200 sable furs." Similarly, when Romanos Lekapenos sent to the caliph an embassy to discuss peace and ransom of captives, he also sent a large number of gifts consisting primarily of bejeweled gold and silver vessels, cups and caskets, and many varieties of silk cloth. The Commander of the Faithful responded that "he has provided the envoy with what has poured out of your provisions, so as to safeguard you from shyness and to prove yourself to be above opportunism." Every important element of Mauss' typology of gift exchange is here: gift and counter-gift, the obligation to give, take, and respond, the honor accruing to both gift giver and gift taker—truly a noneconomic exchange.

It was not, however, without economic implications. Some gifts were very valuable indeed. Constantine IX, credited with surpassing generosity by this source (and, less approvingly, also by Byzantine ones), sent the caliph in 1046 (on the occasion of a treaty) 216,000 gold coins and 300,000 dinars (somewhat lighter than the Byzantine *nomisma*). This is a total of 2.23 tons of gold. The gifts sent by Romanos Lekapenos were said to be "enormous." Quite apart from the intrinsic value of the gifts, one may argue that some of the production of high-quality silk cloth was meant for state needs, for an exchange that had important political, but very limited commercial value. Such differentiations must certainly be kept in mind when the economy of exchange is discussed. It must also be kept in mind that gifts or tribute are of interest in this connection only when they consist of goods, for example, silks, perfumes, jewelry, which thus circulate without going through the market. Gifts or tribute paid in cash may indeed be of economic importance because of their size,³⁵ but do not affect the way goods circulate.

It must also be kept in mind that chronology is important. Noncommercial exchange undoubtedly played a different role in different periods, because of both political and economic factors. As an example, one may adduce an event that took place in 1192. Venetian ships, carrying Byzantine ambassadors to Saladin and Egyptian ambassadors to Byzantium, as well as Saladin's gifts to Isaac II and the goods of some Byzantine merchants, were attacked by Genoese and Pisan pirates. At least two relevant points may be raised here: first, merchants took advantage of political missions, thus reducing their costs (a phenomenon that may not be limited to this period); and second, although undoubtedly Isaac II sent gifts to Saladin, what reached Cairo was a combination of imperial gifts, the wares of merchants, and possibly wares belonging to the emperor's brother, the large sum of money belonging to whom cannot have been gifts but must have come from the sale of items belonging to him. Thus gift exchange could also facilitate trade, in a process where noneconomic exchange opened the way to economic exchange.³⁶

Barter, I would argue, played an analogous role. Generally speaking, the exchange

³⁵ See, for example, the gifts of 4,320,000 *nomismata* said to have been made by Theophilos to private individuals: *Theophanes Continuatus*, 255–56; Treadgold, *Finances*, 83–86.

³⁶ On this, see Laiou, "Exchange and Trade," 750, and the discussion in A. E. Laiou, "Byzantine Trade with Christians and Muslims and the Crusades," in *The Crusades from the Perspective of Byzantium and the Muslim World*, ed. A. E. Laiou and R. P. Mottahedeh (Washington, D.C., 2001).

of goods (or services) for goods (or services) can take place in many different circumstances and play different economic roles, depending on the society and on the needs such exchange fulfills. Barter can flourish in rather sophisticated exchange systems, such as the trade between western Europe and the Levant in the late Middle Ages, not to mention the role of similar economic arrangements in modern societies.³⁷ In premodern societies, it may signal an undeveloped system of exchange, or an undeveloped segment of the system of economic exchange. Although barter can certainly be an economic exchange, it lies between market and nonmarket exchange. It can involve negotiation, so that some aspects of the market are present. It also involves an implied standard of value, though this may not always be freely arrived at. Polanyi spoke of equivalencies as being necessary for trade in kind, and such equivalencies may be created by an authority outside the marketplace. It seems to me that barter is a cumbersome way of doing business, which is most successful either in small, local exchanges, or in controlled exchanges, where important goods might be exchanged, but at prices or equivalencies already set through administrative means. It is, in any case, a type of exchange that admits markets, at least those of a somewhat controlled kind; it also admits the function of the middleman, the merchant, but not easily. Much has been made of the importance of barter in the Byzantine Empire, but I think that its role was often of a transitional nature.

Kosmas Indicopleustes, the first merchant-writer known to us, gives an interesting account of pure barter. He is the sole Byzantine source to speak of silent barter, as practiced, in his report, by the peoples of “Sasou.”³⁸ The region, he says, is rich in gold. Every two years, the king of the Axumites, through an intermediary, sends his people there to exchange goods (oxen, salt, and iron) for gold (ἔνεκεν πραγματείας χρυσοῦ). When they arrive at what is presumably a traditional place, they stop, they make a fenced enclosure with thorny bushes, and inside it they display the carcasses of oxen, as well as salt and iron. The natives come and place one or two small pieces of gold on whichever of these goods they desire, and then they retire. If the owner of the ox, salt, and so on, is satisfied, he takes the gold, and in turn the native takes the object he bid for. If he is not satisfied, he leaves the gold where it is, and the native then either adds to it until the sale is made or goes away—no bargain. “Such,” says the author, “is the nature of their exchange, for they speak different languages and, above all, they lack interpreters.”

This passage has some similarities with the much better known one of Herodotos, where the Carthaginians trade in the following way at a place in Libya: they unload their cargo, lay it down on the beach, and go aboard their ships and light a fire. The natives come, inspect the cargo, put down some gold, and retire. If the Carthaginians

³⁷ J. Day, “A Note on Monetary Mechanisms, East and West,” *EHB* 968. The intricacies of modern economic arrangements are far beyond the scope of this discussion (and of my competence), and will not be taken into account in the generalizations that follow.

³⁸ W. Wolska-Conus, *Cosmas Indicopleustès, Topographie chrétienne* (Paris, 1968), 1:361–63 (book II, 51); cf. n. 51 on p. 360: Sasou is situated southwest of Axum, in the valley of the Blue Nile and in the zone that extends south.

think the gold is “worth their merchandise,” they take it and go away. Otherwise, they return to their ships and wait until the gold matches the (perceived) value of the cargo.³⁹

Herodotos’ silent trade has been seen as the origin of prehistoric coastal Mediterranean *emporía*,⁴⁰ but that is of no interest to us here. What is of interest is the narration of Kosmas (to the extent that it is independent of Herodotos) for the following reasons. First, we have here a case of relatively pure barter, carried out, to be sure, not between producers and consumers, but, rather, between the agents of producers (of oxen, salt, etc.) and the producers or agents of the producers of gold. Thus barter does involve agents (merchants in the case of Herodotos) and not only direct producers. Second, we see the process of price formation, which in Kosmas is, surely, an economic process: “if [the owner of the ox] likes [the amount of gold] he takes the gold,” and the exchange proceeds. Price is formed in the marketplace, through the satisfaction of perceived value. But, although the process as described overcomes the linguistic barrier, it is cumbersome, good only for limited exchanges. This I consider to be true of all barter, unless the political power intervenes and fixes equivalencies; in tenth-century Constantinople, however, the equivalencies appear to have been fixed by Byzantine merchants, when they traded with Bulgarians.⁴¹ Finally, it is to be noted that Kosmas reports this as a curiosity, to be explained away. Barter in a relatively pure form is, to him, very strange. This is not to say that barter did not exist in the sixth century, for it did, in local markets and fairs; but to a merchant it seemed peculiar.

Indeed, barter in Byzantium was the first stage in transactions that eventually became monetized. So it was with the monasteries of Mount Athos, which started exchanging their products by barter and soon began selling them for cash.⁴² So also it was with the Bulgarians, who bartered their linen and honey in Constantinople in the tenth century, and paid their taxes in kind, until they were forced into a money economy and money transactions. So it may have been with the Pechenegs, although we see only the first stage of the process, by which they bartered their services to the inhabitants of Kherson in exchange for luxury products, in an equivalency that was arrived at through bargaining.⁴³ It is, then, important, to see the economy of exchange as a dynamic process, in which trade can arise out of, or in the wake of, noneconomic exchange, and limited transactions such as those involved in barter can develop into monetized market dealings.⁴⁴

³⁹ Herodotos 4.196. The differences between the two passages, discussed by Giardina, *Società romana*, 525–26, do not seem substantive to me, with the exception of the last one, which is that Herodotos passes moral judgment (“Herein neither party . . . defrauds the other”), while Kosmas makes a practical statement about the difficulties of communication.

⁴⁰ Polanyi, “Ports of Trade,” 33–34.

⁴¹ Laiou, “Exchange and Trade,” 733.

⁴² Cf. *Vita Athanasii*, 38.9–30, in *Vitae duae antiquae Sancti Athanasii Athonitae*, ed. J. Noret (Turnhout, 1982), and *Actes du Prôtaton*, ed. D. Papachryssanthou (Paris, 1975), nos. 7, 8.

⁴³ *De Administrando Imperio*, ed. G. Moravesik and R. J. H. Jenkins (London–Washington, D.C., 1962–67), chap. 6.

⁴⁴ The reverse, of course, can also happen.

This dynamic process can best be understood by the use of tools from a variety of workshops. The contribution of the science of economics to economic history, including the history of exchange, is of paramount importance. The tools of economic analysis are essential for understanding specific sectors of the economy, but they must be used sensitively. The work of anthropologists and sociologists, and of historians after them, has alerted us to the fact that there is noneconomic exchange; that exchange and commerce are not coterminous; that the economic function of local markets and long-distance markets may be very different; that not all exchange is carried out by merchants. The historian who analyses the Byzantine economy of exchange should examine the sources with an eye to specificities and, above all, to differences among chronological periods. Both noneconomic and economic exchange existed at all times in Byzantium, as they do in all societies, including our own. The task should be to identify the phenomena that belong to either sphere, to examine their relative weight, to the extent possible, and then to try to determine the dominant trends, which means to identify the factors of articulation at specific historical moments.

Exchange and Trade, Seventh–Twelfth Centuries

Angeliki E. Laiou

In terms of the economy of exchange, the period from the seventh to the twelfth century must be subdivided into three sections in order to take account of changes and evolutions. The first period consists of the seventh and eighth centuries, the years 815–825 forming a convenient cutoff point. The second period extends to the end of the tenth century. Basil II's novel of 996, which includes a clause on fairs, and the privileges he granted to the Venetians in 992 close off one period and begin another, and are near enough to the year 1000 for it to be used as a point of division. The third period covers the eleventh and twelfth centuries to 1204.

The Seventh Century to the Early Ninth Century

The first period begins at some point in the seventh century, difficult to define precisely, because various parts of the empire were affected by new conditions at different times. For the Balkans, it was the Avaro-Slav invasions of the late sixth and the early seventh century that created substantively new conditions. But in Syria and Egypt, the economy of exchange continued along more or less the same lines as it had done in the sixth century, until these areas fell to the Arabs in the 640s. This discussion focuses not on late antique trends, but on those that developed in the course of the Slav invasions and the Arab conquests. A dearth of documentation makes the study of exchange and commerce particularly difficult. The few extant sources—narrative, hagiographical, and legal—must be used along with the archaeological material, even though the information they give is not always consistent; and sometimes one is forced to use material from a later period, primarily the ninth century, to illuminate developments that otherwise remain unclear. A good deal of conjecture is inevitable, and scholars remain divided as to the basic structures of society in this period, including the economic structures.¹

¹ Among the most important items in the bibliography are the following M. F. Hendy, "From Antiquity to the Middle Ages: Economic and Monetary Aspects of the Transition," in *De la Antigüedad al medioevo (Siglos IV–VIII): III Congreso de Estudios Medievales* (León, 1991), 323–60; idem, *Studies in the Byzantine Monetary Economy c. 300–1450* (Cambridge, 1985); idem, "East and West: Divergent Models of Coinage and Its Use," in *Il secolo di ferro: Mito e realtà del secolo X* (Spoleto, 1991), 2:637–79;

As far as exchange, both economic and noneconomic, is concerned, a number of factors affected its development negatively. The great plagues of the sixth century, and the concomitant decline of the urban population, are in themselves indicators of reduced urban/rural exchange. At the same time, the loss of the eastern provinces, especially of Egypt, which fed the population of Constantinople through the nonmarket infusion of the *annona* grain, might, at least in theory, increase the market exchange of grain. The political and military disasters, starting with the Slavic incursions and settlements in the Balkans, dating from the late sixth century, and then the temporary Persian conquest of Syria-Palestine-Egypt in the early seventh century, soon to be followed by the Arab conquest of these areas, the conquest of North Africa, and the constant Arab incursions into Asia Minor affected the structure of the state, its finances, and the possibilities of exchange. Because of the Avar and Slavic incursions, the land routes between Constantinople and Thessalonike, Thessaly, Greece, and the Peloponnese were cut off until some time in the early ninth century.² The sea routes remained open, to some extent, but, especially after the conquest of Crete in 827, navigation was risky because of the activities of pirates, operating from Cilicia and Crete as well as North Africa. Thus sea communications also were disrupted and changed, now becoming small-scale navigation, with the islands of the Aegean acting as relay stations.³ Wars, which in this period took place mostly on imperial soil, were highly destructive for both agriculture and, by extension, exchange. Booty transferred to Bulgarians and Arabs part of the resources of the empire, including cash. During the reign of Nikephoros I (802–811), the Bulgarians captured the salary of an army on the Strymon, 1,100 pounds of gold or 79,200 gold coins, a very considerable sum, and in 811 the Arabs captured the payroll of the Armeniakon (1,300 pounds of gold or 93,600 gold coins).

N. Oikonomides, "Silk Trade and Production in Byzantium from the Sixth to the Ninth Century: The Seals of Kommerkiarioi," *DOP* 40 (1986): 33–53; idem, "Le marchand byzantin des provinces (IXe–XIe s.)," in *Mercati e mercanti nell'alto medioevo: L'area euroasiatica e l'area mediterranea* (Spoleto, 1993), 633–60; *Hommes et richesses dans l'Empire byzantin*, 2 vols. (Paris, 1989–91), esp. vol. 1; H. Antoniadis-Bibicou, *Recherches sur les douanes à Byzance: L'octava, le kommerkion, et les commerciaires* (Paris, 1963); A. E. Laiou, "The Church, Economic Thought and Economic Practice," in *The Christian East, Its Institutions and Its Thought: A Critical Reflection*, ed. R. F. Taft (Rome, 1996), 435–64; idem, "Händler und Kaufleute auf dem Jahrmarkt," in *Fest und Alltag in Byzanz*, ed. G. Prinzing and D. Simon (Munich, 1990), 53–70, 189–94; P. Grierson, "Coinage and Money in the Byzantine Empire, 498–c. 1090," in *Moneta e scambi nel alto medioevo* (Spoleto, 1961), 411–53; R. S. Lopez, "The Role of Trade in the Economic Readjustment of Byzantium in the Seventh Century," *DOP* 13 (1959): 69–85; J. L. Teall, "The Grain Supply of the Byzantine Empire, 330–1025," *DOP* 13 (1959): 89–139; C. Morrisson, "Monnaie et prix à Byzance du Ve au VIIe siècle," in *Hommes et richesses*, 1:239–60; E. Eickhoff, *Seekrieg und Seepolitik zwischen Islam und Abendland: Das Mittelmeer unter byzantinischer und arabischer Hegemonie (650–1040)* (Berlin, 1966). The article by H. Magoulias, "The Lives of Saints as a Source of Data for the History of Commerce in the Byzantine Empire in the VIth and VIIth Centuries," *Kleronomia* 3 (1971): 303–30, is useful, among other things, for showing the late antique aspect of exchange in the eastern provinces of the Byzantine Empire before the Arab conquest.

² See A. Avramea, "Land and Sea Communications, Fourth–Fifteenth Centuries," *EHB* 64–66, 71.

³ H. Ahrweiler, "Les ports byzantins (VIIe–IXe siècles)," in *La navigazione mediterranea nell'alto medioevo*, 2 vols. (Spoleto, 1978), 1:259–83.

A total of 172,800 nomismata was transferred within a few years, which must have rankled with an emperor bent on recovering all possible sources of revenue.⁴

Noneconomic Exchange

Noneconomic exchange was at low levels compared to the period before and after, but not inexistent. Its presence shows that the imperial government still had some, although reduced, resources at its command, especially in silk stuff and coins.⁵ Donations to the emperor's subjects and gifts to foreigners were limited until the reign of Michael I, then seem to increase. In 705–711, Justinian II sent to the caliph al-Walid a gift of 100,000 mithqals of gold and 40 mule loads of gold tesserae along with 1,000 workers.⁶ Constantine V was able to send, in 768, 2,500 silk garments to the Slavs to ransom captives from Imbros, Tenedos, and Samothrace. A year later, he made donations of gold on the occasion of the coronation of his third wife. His son, Leo IV, sent silks to the Franks as gifts, possibly in the course of negotiations for a marriage alliance. As annual tribute to the caliph, Empress Irene paid 140,000 nomismata for seven years, and also paid tribute to the Bulgarians; in 805 Nikephoros I promised to pay 30,003 nomismata a year to the Arabs. Michael I was able to give monks in Cyprus a talant of gold and, in 812, to make to the church of Hagia Sophia gifts (in silver) worth 95 pounds of gold.⁷

Within the empire, there was low demand, given the relative decline of the cities, in both demographic and economic terms, which must be considered a certainty for the period ranging from some time in the late sixth century (depending on the locality) to ca. 800.⁸ A number of the large cities—for example, Alexandria and Antioch—were lost to the empire, and the ones that remained decreased in size.⁹ The cities of Asia

⁴ For Krum's campaigns and their destructive results, see F. Iadevaia, *Scriptor incertus de Leone Armenio* (Messina, 1987), 53ff. Harun al-Rashid invaded Asia Minor and captured loot worth 60,000 nomismata: Theophanes, *Chronographia*, ed. C. de Boor, 2 vols. (Leipzig, 1883–85; repr. Hildesheim, 1963), 482. Cf. *ibid.*, 484–85, 489, 501–2, and *Theophanes Continuatus*, ed. I. Bekker (Bonn, 1838), 14.

⁵ M. Kaplan, *Les hommes et la terre à Byzance du VI^e au XI^e siècle: Propriété et exploitation du sol* (Paris, 1992), 544; R. S. Lopez, "Le problème des relations anglo-byzantines du 7^e au 10^e siècle," *Byzantion* 18 (1946–48): 139–62.

⁶ Ghada al-Ḥijjāwī al-Qaddūmī, *Book of Gifts and Rarities: Kitāb al-Ḥadāyā wa al-Tuḥaf* (Cambridge, Mass., 1996), account 9. A mithqal is the weight of a dinar, 4.23 g; W. Hinz, *Islamische Masse und Gewichte* (Leiden, 1955), 1ff.

⁷ W. T. Treadgold, *The Byzantine State Finances in the Eighth and Ninth Centuries* (New York, 1982), 83–86; *Nicephori archiepiscopi Constantinopolitani Opuscula historica* (Leipzig, 1880; repr. New York, 1975), 76 (hereafter Nikephoros); Theophanes, 499, 500; A. Muthesius, "Silken Diplomacy," in *Byzantine Diplomacy*, ed. J. Shepard and S. Franklin (London, 1992), 242.

⁸ For Constantinople, see C. Mango, *Le développement urbain de Constantinople, IV^e–VII^e siècles* (Paris, 1985), 51–62, and P. Magdalino, "Medieval Constantinople: Built Environment and Urban Development," *EHB*; for cities in general, see G. Dagron, "The Urban Economy, Seventh–Twelfth Centuries," *EHB*, and K.-P. Matschke, "The Late Byzantine Urban Economy, Thirteenth–Fifteenth Centuries," *EHB*.

⁹ Although see the cautionary note struck by J. Russell, "Transformations in Early Byzantine Urban

Minor became small and catered primarily to the needs of defense.¹⁰ Indeed, defense became a primary concern of the state and the society. Nevertheless, it must be remembered that defense included the provisioning of cities, so that exchange of some kind is also involved. In any case, the empire became much more ruralized than before, and this undoubtedly had results for trade and exchange. However, the magnitude of the results depends to some considerable extent on one's understanding of the earlier period. If it is true that in the late Roman/early Byzantine Empire exchange was heavily "tied" trade or "controlled" trade, then the results must be different than if one assumes that entrepreneurial trade had been important.¹¹ It is possible to argue, and it has been argued, that the factors mentioned above led to reduced need for trade and that therefore trade was extremely limited.¹² It has also been argued that, on the contrary, the vicissitudes of the state presented a challenge that led to structural changes in trade.¹³ Let us, then, look at the evidence.

It should be mentioned at the outset that narrative, hagiographic, and legal evidence provide information that is somewhat at odds with archaeological evidence, the first set of sources permitting an interpretation that allows a greater role for trade than does the latter. As always, in the Middle Ages, grain and textiles are the two major commodities that can be used to gauge the importance of exchange. When we speak of the grain trade, we must take into account both the supply and the demand. The supply in this period cannot have been very high, especially after the loss of Egypt, given the depopulation of the empire and the low production of grain. The demand must have been considerably lower than, for example, in the early sixth century, before the plague had reduced the population of the cities, and before the further depopulation of the seventh century. Nevertheless, there was demand for grain, primarily for the army and for the provisioning of the cities.¹⁴ The discussion of trade and commodities in this chapter deals primarily with trade between town and country or between regions and the commodities involved in it. Small-scale trade in the cities is treated in detail by G. Dagron in "The Urban Economy, Seventh–Twelfth Centuries," in this volume.

Economic Exchange

Grain The case of Thessalonike in the course of the late sixth and the seventh century is better documented than most. The major source is the Miracles of St. Deme-

Life: The Contribution and Limitations of Archaeological Evidence," *The Seventeenth International Byzantine Congress, Major Papers* (New Rochelle, N.Y., 1986), 137–54.

¹⁰ See Ch. Bouras, "Aspects of the Byzantine City, Eighth–Fifteenth Centuries," *EBH* 501–2.

¹¹ For speculation regarding "tied" and "controlled" trade in the early Byzantine Empire, see Hendy, "From Antiquity," *passim*.

¹² J. Haldon, *Byzantium in the Seventh Century: Transformation of a Culture* (Cambridge, 1990), 117ff; Hendy, *Studies*, 554ff.

¹³ Lopez, "Role of Trade."

¹⁴ For the army, see N. Oikonomides, "The Role of the Byzantine State in the Economy," *EBH* 982–83.

trios, and the historical background is that of a series of attacks on the city by Slavs and Avars, beginning in 586; the relevant information takes us through the late seventh century. During this period, the city was effectively cut off from Constantinople by land, but communications by sea were easier. The provisioning of the city with grain must have come partly from the immediate hinterland; thus, when the Avaro-Slavs first besieged Thessalonike, they collected, from the countryside, much wheat and other grain, from that year's harvest and the reserves from previous years.¹⁵ In times of siege and famine, the hinterland was inaccessible and the sea became more important. A famine, datable perhaps to the fall of the first year of Herakleios, was resolved because St. Demetrios persuaded the merchants (ἔμποροι) to send ships "from many different regions" with grain.¹⁶ One region in particular is mentioned, namely, Chios, most probably as a relay station for grain coming from Egypt, originally meant for Constantinople but diverted to Thessalonike by the efforts of the prefect of the Illyrikon. During the siege of the city in 619, St. Demetrios arranged for grain ships (σιτοφόρους ὀλκάδας) to come to Thessalonike; the *naukleroi* (ship captains) claimed that they were persuaded to come here by a *kangellarios* (an imperial official).¹⁷ Those who transport the grain, in 610, in 586, and in 619, are called ἔμποροι and ναύκληροι.¹⁸

Later in the seventh century, in 676–677, the situation seems to be as follows: grain is still coming into Thessalonike by sea, whether sent from Constantinople by the emperor or sought by the inhabitants of the city in areas to the south, that is, among the Slavs living in Demetrias and in Phthiotid Thebes. The *naukleroi* are not mentioned in this connection, and on the contrary it is the civil authorities of Thessalonike (and Constantinople) that seem to have the provisioning of the city in hand. At the same time, Thessalonike seems to function in some way as a grain market, that is, as a place where grain is concentrated and sold to outsiders. Is it concentrated here from the city's hinterland? It would seem to be the case. A telling passage speaks of the actions of the "governors" who took it on themselves to sell secretly, at very high prices and for export, the grain stored in the "public granaries."¹⁹ Ten ships were sent from the emperor with grain, which was sold to the citizens by those who brought it, who also seem to have had the authority to search the houses of citizens for hidden grain.²⁰ The search for grain to be bought (ἐξωνήσασθαι) in Demetrias was a decision taken jointly by the governor of the city and the inhabitants. It is interesting that the grain supply here seems to be in the hands of public authorities: the emperor and the municipal

¹⁵ P. Lemerle, *Les plus anciens recueils des miracles de Saint Démétrius et la pénétration des Slaves dans les Balkans*, 2 vols. (Paris, 1978–80), 1:148, miracle 1.9.

¹⁶ *Ibid.*, 1:106ff, miracle 1.9; 2:43–44. Cf. J. Durliat, *De la ville antique à la ville byzantine: Le problème des subsistances* (Paris, 1990), 394.

¹⁷ Lemerle, *Miracles de Saint Démétrius*, 1:188, miracle 2.12; cf. Durliat, *De la ville antique*, 392ff.

¹⁸ Cf. Lemerle, *Miracles de Saint Démétrius*, 1:102, miracle 1.8; there is, again, a diversion of the grain that had reached Chios and was meant for Constantinople. On the provisioning of the cities in this period, see also Dagron, "Urban Economy."

¹⁹ Lemerle, *Miracles de Saint Démétrius*, 1:211–12, miracle 2.4; on this affair, see Durliat, *De la ville antique*, 401ff.

²⁰ Lemerle, *Miracles de Saint Démétrius*, 1:214; grain was twice sent from Constantinople, p. 221.

officials, who seem to be in control of the granaries and to have the right to sell the grain. Should we see here, with P. Lemerle, a group of “great merchants, who also held municipal office”?²¹

About the provisioning of Constantinople after the loss of Egypt, much less is known than about that of Thessalonike.²² Herakleios stopped the free distribution of bread in 618, and the population of the capital was already lower than during its sixth-century height, but the demand for grain was still high. The area around Thessalonike, in normal times when such existed in the seventh century, exported grain to Constantinople, as the *Miracles of St. Demetrios* again inform us. By ship, the grain went through the islands (of Thrace), the Straits, Parion, and Prokonnesos to Constantinople.²³ Grain came from the western coast of the Black Sea, and it is reasonable to think of grain with regard to the commercial clauses of the treaties of 716 and 812 with Bulgaria. It also came from the Thracian hinterland and Bithynia; Ephesos is another possible source, at least at the time of St. Gregory the Decapolite (early 9th century).²⁴ How this grain arrived, or who brought it, remains unknown. It seems unlikely that the provisioning in grain in this period should have been left entirely to free trade.²⁵ If the land tax was collected in kind, at least until the reign of Constantine V, that is, during the worst and most dangerous times, this might have solved the problem of at least the people who might depend on imperial largesse. Otherwise, there is evidence of grain ships coming into Constantinople, but little information on the precise role of the people who brought the grain, or of the possible involvement of the government, for example in buying, storing, and selling grain, as the civil authorities were doing in Thessalonike.

An occasional famine in Constantinople, such as that of 743, shows the price of food soaring.²⁶ This was at the time of the rebellion of Artabasdos, when he was master of the city, while Constantine V besieged it by sea. Artabasdos tried to provision the city by sending out ships (to Bithynia?), but Constantine V captured them and distributed them to his soldiers. The price of barley, millet, other grains, pulses, olive oil, and wine rose precipitously, which shows the importance of imported provisions, presumably from Asia Minor and the Aegean islands.

Silk Silk was the other important commodity, used by the state both as a means of payment and as an important means of diplomacy. After Justinian I, the manufacturing

²¹ Ibid., 2:118: “une classe de gros commerçants, qui seraient en même temps les détenteurs du pouvoir municipal.”

²² The article by Teall, “Grain Supply,” is rather general and does not discuss the details of the provisioning of the city during these important centuries.

²³ Lemerle, *Miracles de Saint Démétrius*, 1:220.

²⁴ Teall, “Grain Supply,” 117–28.

²⁵ Kaplan, *Les hommes et la terre*, 469. On the other hand, I am not persuaded by the idea that the grain trade was entirely controlled by the government, at least in Constantinople: see E. Patlagean, *Pauvreté économique et pauvreté sociale à Byzance, 4e–7e siècles* (Paris, 1977), 187.

²⁶ Theophanes, ed. de Boor, 1:419–20.

and sale of silk had become a state monopoly. In the seventh century, the manufacturing of silk increased, and its sale seems to have become organized along different principles.

Other Items of Exchange Apart from foodstuffs such as grains, olive oil, and wine, salt was probably also traded. Thessalonike had salt pans, one of which was donated by Justinian II to the church of St. Demetrios. Salt was an important commodity, whose export outside the frontiers of the empire was forbidden.²⁷

Trade in slaves is attested, both on behalf of the state²⁸ and, possibly, by private individuals. They had to pay a duty of 2 nomismata per head when slaves were brought by sea to Constantinople from the outside; the Dodecanese is mentioned specifically.²⁹ A letter from Pope Hadrian I to Charlemagne, dated 791, asserts that evil Greek merchants, sailing to the west coast of Italy, habitually bought slaves from the Lombards.³⁰

Foreign Trade Foreign trade, limited though it was, did exist. In the first half of the seventh century, Jewish (Byzantine) merchants traveled between Constantinople and Carthage, Spain, and Gaul.³¹ Recent work has disputed the idea that commercial exchange between the western and eastern Mediterranean was virtually extinct in the ninth century. Instead, M. McCormick sees the nadir of exchange in ca. 700, with a revival, especially in the ninth century, dependent on the revival of the western economy. He considers that there were merchants from western Europe going to the East, especially Palestine, and that there was a significant change in the routes of communication, with westerners going to Jerusalem through the Byzantine Empire in the first half of the eighth century and then going by way of North Africa and Egypt.³²

Venice, still a part of the Byzantine Empire, had trading activity throughout the period in question; salt, wood, iron, and slaves, as well as luxury products from the East, are the products exchanged in this trade, both with the Italian and Frankish hinterland and with Egypt and Constantinople, where a purchase is mentioned in the testament of Patriarch Fortunatus.³³

In western and central Europe, the limited diffusion of Byzantine coins probably points to noneconomic exchange, that is, to contact of political rather than economic

²⁷ A. A. Vasiliev, "An Edict of the Emperor Justinian II," *Speculum* 18 (1943): 1–13; H. Grégoire, "Un édit de l'empereur Justinien II, daté de septembre 688," *Byzantion* 17 (1944–45): 119–24a. For the prohibition, see *Bas.* 56.1.11.

²⁸ See the case of a very large slave sale, Oikonomides, "Silk Trade," 51.

²⁹ Mentioned as a vexation of Nikephoros I, in Theophanes, ed. de Boor, 1:487.

³⁰ Codex Carolinus (see *ODB*, s.v.), MGH, *Ep*, III, ep. no. 59, p. 585, lines 9–23. I owe this reference to Michael McCormick. Cf., in the same volume, ep. 86 (787–791), which mentions Venetian merchants in Ravenna.

³¹ *Doctrina Jacobi nuper baptizati*, in G. Dagron and V. Déroche, "Juifs et chrétiens dans l'Orient du VIIe siècle," *TM* 11 (1991): 213–19.

³² M. McCormick, "Les pèlerins occidentaux à Jérusalem," in press; I thank Michael McCormick for allowing me to see the manuscript of this article.

³³ Antonio Carile and Giorgio Fedalto, *Le origini di Venezia* (Bologna, 1978), 207–12.

nature.³⁴ In the interior of the Balkan peninsula, exchanges may have been non-economic, consisting essentially of a combination of booty and gifts.³⁵ With Bulgaria, trade seems to have taken place at specific stations, designated by the Byzantine state. Mesembria was one such station, meant to service trade with the Bulgarians. That trade existed between the Bulgarians and the Byzantines is clear by the existence of seals of *kommerkiarioi* starting in 690–691, as well as by the terms of the treaty of 716, as reported in the negotiations between Krum and Emperor Michael II in 812. That treaty had provided that Bulgarians could buy from the Byzantines luxury items, consisting of (silk?) garments and red (purple?) leather of a value of up to 30 (or 50) pounds of gold.³⁶ When Mesembria was taken by Krum in 812, it was found full of “necessary things,” which presumably means grain, as well as much gold and silver.³⁷ What the gold and silver represented is something of a mystery, since the Bulgarians at this time had no coinage.³⁸ Byzantine trade may have been carried out at least partly in barter, a situation that obtained with the Bulgarians even in the tenth century. It may also, however, have involved payment in unminted gold and silver on the part of the Bulgarians. Mesembria and subsequently Develtos were thus functioning as official places of exchange. It is not said that the price of the merchandise to be exchanged was fixed; on the other hand, the total value of the Byzantine goods was fixed, which means that the quantity might oscillate. Furthermore, the same treaty provides that the merchants (ἐμπορευόμενοι) of both states should have their merchandise officially stamped with a seal, on pain of confiscation.³⁹ Trade takes place here in a well-fortified frontier town, with part of the terms of exchange fixed by the government. Thus there are some of the elements of what has been called a port of trade, but only some, since prices are not fixed by the state, nor is bargaining excluded. The conditions of trade are to some degree controlled by the government, but individuals have a certain latitude of action. The importance of frontier towns, such as Venice, Mesembria, and, during much of that period, Thessalonike, for foreign trade is notable.

³⁴ C. Morrisson, “La diffusion de la monnaie de Constantinople: Routes commerciales ou routes politiques?” in *Constantinople and Its Hinterland*, ed. C. Mango and G. Dagron (Aldershot, 1995), 86.

³⁵ J. Ferluga, “Mercati e mercanti fra Mar Nero e Adriatico: Il commercio nei Balcani dal VII all’XI secolo,” in *Mercati e mercanti* (as above, note 1), 450. See also C. Panella, “Gli scambi nel Mediterraneo Occidentale dal IV al VII secolo dal punto di vista di alcune ‘merci,’” in *Hommes et richesses* (as above, note 1), 1:129–41, and C. Abadie-Reynal, “Céramique et commerce dans le basin égéen du IVe au VIIe siècle,” *ibid.*, 143–59.

³⁶ Theophanes, ed. de Boor, 1:497; *Theophanes Continuatus*, 12–13; N. Oikonomides, “Tribute or Trade? The Byzantine-Bulgarian Treaty of 716,” in *Studies on the Slavo-Byzantine and West-European Middle Ages: In Memoriam I. Dujčev* (Sofia, 1988), 1:29–31.

³⁷ Theophanes, ed. de Boor, 1:499.

³⁸ Cf. the large amounts of copper found in Preslav when Nikephoros I entered it; it seems to have been unminted metal. Nikephoros distributed it to his soldiers along with the other booty, including clothes: Iadevaia, *Scriptor incertus*, 28.

³⁹ τοὺς δὲ ἐμπορευομένους εἰς ἑκατέρας χώρας διὰ σιγίλλων καὶ σφραγίδων συνίστασθαι, <τοῖς δὲ σφραγίδας μὴ ἔχουσιν ἀφαιρεῖσθαι> τὰ προσόντα αὐτοῖς καὶ εἰσκομίζεσθαι τοῖς δημοσίοις λόγοις. Theophanes, ed. de Boor, 1:497.

Forms and Agents of Exchange

That there was exchange of various types in these difficult centuries is, I think, clear. It was limited in scope and distance. In order to describe the scope of trade, I use the terms local, regional, and interregional trade; for a definition of these terms, I use an adaptation of L. de Ligt's criteria regarding fairs. Local trade would involve short distances (50 km or less, according to de Ligt) and direct exchange between producers and consumers. Regional trade networks would extend over larger areas (50–300 km) and involve large-scale transactions in the exchange of goods produced and consumed within the areas in question. Interregional trade would involve areas over 300 km, its objects would be expensive luxury goods, and the merchandise would eventually be transported elsewhere: this was *entrepôt* trade.⁴⁰ The distances must be taken only as general indicators, and much depends on whether the transportation was by land or by sea.⁴¹ The type of transaction and the goods exchanged are more important criteria. According to these definitions, and while keeping in mind that trading activity was limited, we can discern in this period at least local trade, certainly in foodstuffs, which must have been of importance in the area around Thessalonike and Constantinople, and perhaps regional trade in the connection between Thessalonike and Thessaly, and Constantinople and Bithynia and perhaps the Bulgarian coast. But who carried out the exchanges? Were there merchants, professional traders? Was the exchange "tied," administered, in the sense of being carried out by government agents on terms controlled by the government? Or was there an intermediate or mixed situation?

In the case of the people who appear in the *Miracles of St. Demetrios* as carrying grain or dealing in grain, there are a number of possible interpretations. The source mentions merchants and sea captains carrying the grain and deciding where to sell it, which might suggest that we are in the presence of professional merchants. On the other hand, the officials of the city of Thessalonike as well as those of Constantinople order grain and arrange for it to be bought and sold; this has suggested the interpretation that the grain was public grain, and that public functionaries were primarily responsible for its distribution.⁴² It has further been suggested that there was no private trade in grain, and that in any case the provisioning of the cities to a large extent did not depend on the market, given the distribution of gifts of food by the government and the church.⁴³ I think that in fact the situation was a mixed one. The activities of the governors of Thessalonike with regard to grain in the late seventh century are probably best interpreted as those of people whose primary authority was political, that is, who were imperial officials, but who also functioned as great merchants. The

⁴⁰ L. de Ligt, *Fairs and Markets in the Roman Empire* (Amsterdam, 1993), 18, 82–83, 88–89; cf. below, 730–31, 754–55.

⁴¹ Durliat, *De la ville antique*, 513–14, calls "grand commerce," as opposed to local and regional commerce, that which extends over distances of 100 km by land or, by sea, covers the distance from Egypt to Greece and from Egypt or Italy to Africa (this discussion is in connection with the grain trade).

⁴² Durliat, *De la ville antique*, 243, 392–99, 401ff; cf. 294ff for the *sitonia*.

⁴³ *Ibid.*, 523–24, 559ff; Patlagean, *Pauvreté économique*, 181ff.

use of the terms *naukleroi* and *emporoi*, interchangeably, in the Miracles of St. Demetrios, apart from underlining an inescapable fact of medieval maritime trade, that is, that ship captains also doubled as merchants, suggests the possible conjunction of merchants acting both on behalf of the state and on their own behalf. The fact that the merchants who carried grain could be persuaded to bring it to Thessalonike or Constantinople suggests a certain freedom of action on their part. Furthermore, as will be seen below, there were also small-scale merchants whose activities must have been free.

The combination of imperial office and mercantile activity may also be seen in the activities of the *kommerkiarioi*. The term appears in the sixth century, replacing that of *comes commerciorum*. The *kommerkiarioi* are state officials who are authorized by the state to carry out trade that is important to the state, that is, luxury products. A novel, possibly dating from the reign of Justinian I, gives them the monopoly right to negotiate with the “barbarians” for the purchase of silk and then resell it to the *metaxarioi*, craftsmen who worked the silk. It has been argued that, in the seventh and eighth centuries, the *kommerkiarioi* were given by the state the exclusive right to organize the production of silk in particular parts of the empire and to sell the product. It has further been argued that the *kommerkiarioi* of Constantinople, Mesembria, and Thessalonike in the late seventh and the first half of the eighth century were in charge of foreign trade, in the last two cases the trade of the hinterland, which was probably carried out through barter. These men, all imperial officials, and acting on behalf of the state, were also acting on their own behalf, making a profit from their activities and trading in other commodities as well. Given the fact that they were state agents, engaged in important commercial activities, one could argue that we have here evidence of what some scholars would call “tied” or “controlled” trade; at the same time, it must be emphasized that they also made money on their own account, and that the price at which they bought and sold does not seem to have been fixed by the state.⁴⁴

The trading activity of relatively large landlords should also be mentioned. In the eighth century, John of Jerusalem accuses iconoclastic bishops of being too much involved with economic concerns: their fields, their money, and the raising of horses, cattle, and flocks. They sold wheat, distributed wine, dealt in olive oil, and traded wool and silk.⁴⁵ If we take this statement at face value, it would mean that producers, not professional merchants, traded goods, which would speak of “tied” trade. If we allow for the inevitable exaggeration, the information is useful for proving the existence of exchange, probably monetized exchange, in agricultural products.

Our documentation also gives unequivocal testimony as to the existence of small

⁴⁴ The discussion of the *kommerkiarioi* is based on that of N. Oikonomides, “Silk Trade.” His analysis has been disputed at length by Hendy, “From Antiquity,” Haldon, *Seventh Century*, 232ff, and A. Dunn, “The *Kommerkiarios*, the *Apotheke*, the *Dromos*, the *Vardarios*, and the *West*,” *BMGS* 17 (1993): 3–24. The argument turns in part on the role of the *apothēke*, on which see Oikonomides, “Role of the Byzantine State,” 985. The debate is much vaster than the specific issues addressed here, since it stems from widely different views of the economy of Byzantium in the 7th and 8th centuries, with Hendy, Haldon, and Dunn accepting a much greater degree of demonetization of the economy and a much more profound decline of trade than does Oikonomides and than is argued here.

⁴⁵ PG 95:329b and cf. PG 100:572, on bishops engaged in estate production in the 9th century.

independent traders. The *Rhodian Sea Law*, whose date of composition probably falls squarely within the period under discussion, regulates, among other things, the duties and responsibilities of the merchants (*emporoi*) and the *naukleroi* (the shipmasters). The merchants here are people who act on their own authority, that is, there seems to be no state agent involved. They are responsible for asking other merchants about the condition and seaworthiness of ships. They can charter a ship, alone or in partnership. They are not supposed to place large and valuable merchandise in old ships, which suggests that they did indeed deal with merchandise both in bulk (wheat, oil, and wine are specifically mentioned, and cloth shipped in bulk, perhaps woolen cloth) and of great value, that is, luxury items; silk cloth (ὀλοσήρικα) and pearls, presumably a generic term for jewelry or precious stones, are mentioned. We see provisions for merchants traveling with merchandise and cash (gold and silver), which would represent their profits or money with which to buy merchandise. They also carry contracts (*grammateia*) with them. Special provisions deal with loads of wheat, oil, and wine and what happens in case the commodities are damaged or lost. Again, there is no state official in evidence: the responsibility is shared between the merchant, the *naukleros*, and the sailors, depending on whose actions are primarily responsible for the damage. This is perhaps why we find, in other sources, sailors trying to persuade a merchant or a ship captain not to delay a journey.⁴⁶ The law regulates what will happen in a number of circumstances, but all the actions envisaged are taken by the merchants or the ship-owners and sailors independently. The ship may be owned in partnership. The *naukleroi* and the merchants may all have merchandise on board ship, which again suggests that, although for liability purposes the two categories are distinguished, the *naukleroi* could, indeed, trade on their own account. The chronicle of Theophanes mentions, in the year 715, μικρά τε καὶ μεγάλα πραγματευτικὰ σκάφη.⁴⁷

Saints' lives, although they present problems of chronology, for example when an eighth-century *vita* recounts the life and deeds of a saint of the fourth century, nevertheless add to this picture. In seventh-century Cyprus, a *naukleros* contracts a sea-loan or, perhaps, a *commendā* contract so as to invest the money and make a profit.⁴⁸ The *Miracles of St. Artemios*, written ca. 660 but incorporating earlier material, mention a number of merchants in Constantinople. One, predictably, is a man from Chios, named Euporos ("the wealthy one"). A wine merchant from Alexandria was in Constantinople during the time of Emperor Maurice, therefore before the loss of Egypt. A shipbuilder is also a shipowner and merchant, who sails to Gaul, "to make profits from trade." A *naukleros* from Rhodes has a ship that regularly sails between Rhodes and Constanti-

⁴⁶ *Rhodian Sea Law: Legis Rhodiae pars secunda*, in Bas. 53, App., 2.11, 27, 40, 30, 31, 37, 38–39; *Miracles of St. Artemios*, ed. A. Papadopoulos-Kerameus, *Varia Graeca Sacra* (St. Petersburg, 1909), 5, 14.

⁴⁷ *Rhodian Sea Law*, 2.9.15; Theophanes, ed. de Boor, 1:385.

⁴⁸ *La légende de S. Spyridon, évêque de Trimithounte*, ed. P. van der Ven (Louvain, 1953), chap. 21, p. 94. Note that the loan is in cash, and the saint uses it to buy merchandise. In the Metaphrastic version of the *vita*, there are interesting changes. The man is called both a *naukleros* and merchant; what he contracts is clearly a loan; and he does not invest it in profit-making enterprises, thus earning negative comment from Symeon Metaphrastes: PG 116:458–60.

nople.⁴⁹ The *vita* of Pankratios of Taormina (a saint of the 1st century A.D.), written by Pseudo-Evagrios possibly in the eighth century, talks of traders (*pragmateutai*) sailing between Sicily and Jerusalem, and mentions, as items of import to Sicily, carpets from Asia, olive oil from Crete, incense and wine from the islands.⁵⁰ But in this case it is very hard to tell whether the stories really belong to the eighth century or are taken from an earlier period. Much more interestingly, the *vita* of Philip of Argyrion, whose father lived in Thrace at the time of Arkadios, and which was written in the eighth century or later, shows not only trade in cattle in Galatia, Cappadocia, and other parts of Asia, but also the activities of three Lydian merchants who went to Sicily to buy grain. They had formed a partnership, pooling together their money (χρυσίον) to buy the grain. The partnership is called κοινότης πραγματείας, and its members are called ἐταῖροι.⁵¹ The reference to a *societas* is interesting. In the same vein, we can mention, during the period of Iconoclasm, a man who lived in Rome and was a trader (*pragmateutes*), who chartered a ship to go to Constantinople.⁵²

Trade was, of necessity, affected by the fiscal system. If we assume that taxes were collected in kind throughout this period, and given the fact that the thematic soldiers made their living primarily from their holdings, then the need for trade is greatly diminished, for the peasant does not need to acquire coin, while the needs of large cities can in part be met by the tax in grain.⁵³ The monetization of taxation, on the other hand, makes local trade necessary, for otherwise the peasant cannot pay his land tax. When Byzantine taxation was monetized remains a matter of dispute, with scholars arguing for any time between the eighth and the tenth century.⁵⁴ A complaint of the anti-iconoclastic sources against Emperor Constantine V is tantalizing. The accusation that he wanted to hoard gold, that his tax collectors forced the taxpayers to sell their produce cheaply, and that as a result the price of wheat and barley fell to very low levels, can only admit one interpretation: that the emperor demanded taxes in specie, and that the peasants were forced to sell their produce on the market, with the result that modern economic theory would predict.⁵⁵ That the base tax was, hence-

⁴⁹ Papadopoulos-Kerameus, *Miracles of St. Artemios*, 5, 45, 39–40, 55–56. There are also people from Phrygia, Cilicia, Rhodes, and Africa (pp. 4, 9–10, 37). Durlat, *De la ville antique*, 523–24, uses the absence of grain merchants in this source to give support to the idea that there was no private involvement in grain transactions. This, however, is not conclusive, for the mention of products in which merchants deal is generally rare.

⁵⁰ C. Stallman, "The Life of St. Pancratius of Taormina" (D. Phil. diss., Balliol College, Oxford, 1986), pp. 13, 409, 49, 377, 20, etc. I owe this reference to the kindness of A. Kazhdan. The dating of the *vita* is also his.

⁵¹ *AASS*, Mai 3:1*B, 4*E–F. The reference is owed to A. Kazhdan. The information in this *vita* suggests that the Arab invasions did not entirely destroy trade between the eastern and western parts of the Mediterranean.

⁵² E. von Dobschütz, "Maria Romaia: Zwei unbekannte Texte," *BZ* 12 (1903): 199ff.

⁵³ This is the scenario suggested by Haldon, *Seventh Century*.

⁵⁴ See Oikonomides, "Role of the Byzantine State," 981ff, and, for various viewpoints, J. Haldon, "Synônê: Re-considering a Problematic Term of Middle Byzantine Fiscal Administration," *BMGS* 18 (1994): 116–53.

⁵⁵ Nikephoros, ed. de Boor, 76; Theophanes, ed. de Boor, 1:443. The suggestion of A. Dunn, "Kommerkiarios," 23, that the measure was "that the treasury lowered the monetary value which it attached to the primary products accepted from fiscal agents" cannot be accepted, for Patriarch Nikephoros

forth, always collected only in specie cannot be affirmed.⁵⁶ It is, however, plausible that the measure inaugurates the process of the commutation of the land tax into money payments. By the time of Nikephoros I, the emperor expected to get “not a small weight of gold” from the taxes of Thrace.⁵⁷

Markets and Fairs

The question of the location in which exchange took place, that is, markets, is a difficult one. We have seen the controlled market of Mesembria, insofar as foreign trade is concerned, and it may indeed be the case that foreign trade as well as trade in staples, especially grain, took place in markets under controlled conditions, as the case of Thessalonike and Constantinople suggests. What happened in smaller cities and in the provinces is quite unclear, and even speculation has its limits. It has been suggested that the ceramics evidence indicates the existence of short-distance trade of some (limited) type.⁵⁸ The *vita* of St. Leo of Catania, written in the eighth or ninth century (the shorter version may date to the 840s), shows an active market in Catania. Its operations were disrupted by the machinations of a demon, who changed stones into gold and wood into silver, reversing the magic once the transaction had been made. The authors say that the “buyers and sellers,” indeed “everybody,” suffered greatly from this mischief.⁵⁹ How many of the fairs of the sixth century, catering to local or regional trade, survived is also unknown; a chance reference to an annual fair in Trimithus (Cyprus) in the seventh century suggests that some did continue. The only detailed piece of information we have concerns the existence, in the late eighth century, of an annual fair at Ephesos, connected with the feast of St. John (8 May), which was probably organized by the church and which yielded, in taxes to the central government, 100 pounds of gold, that is, 7,200 gold coins.⁶⁰ This is a significant sum of money, since it is a percentage (unclear how much, but no more than 10%) of the volume of transactions, which was therefore no less than 72,000 coins.

A low-frequency periodic market, whose most common form is the annual fair, may serve many different purposes. If it caters to regional or interregional trade, it involves specialized producers, professional merchants, and expensive merchandise. It may, on the other hand, cater to local trade and be intrinsically bound to the sale of produce by peasants, with a view to paying their taxes.⁶¹ In that case, the effects on the local

specifically states that the taxpayers were forced to sell their produce cheaply, so that wheat was “bought” at 60 modioi per nomisma, and barley at 70 modioi per nomisma. Hendy’s interpretation (*Studies*, 298–99) also admits the commutation of taxes. Cf. Oikonomides, “Role of the Byzantine State,” 981ff.

⁵⁶ A. Kazhdan, “Ignatios the Deacon’s Letters on the Byzantine Empire,” *BSI* 53 (1992): 197–201.

⁵⁷ Theophanes, ed. de Boor, 1:482–83.

⁵⁸ Russell, “Transformations,” 142–43.

⁵⁹ V. V. Latyshev, *Neizdannnye grecheskie agiograficheskie teksty* (St. Petersburg, 1914), 17–24; A. Accorcia-Longo, “La vita di S. Leone Vescovo di Catania e gli incantesimi del Mago Eliodoro,” *RSBN*, n. s., 26 (1989): 86–89. The authors of the *vitae* place the events during the reigns of Leo III and Constantine V (720–740) or Constantine IV and Justinian II (681–685).

⁶⁰ Theophanes, ed. de Boor, 1:468.

⁶¹ De Ligt, *Fairs and Markets*, 6, 14–15.

economy are shallow, for it simply means that the peasant has in his hands a small amount of money for a short time, until he pays his taxes. The sum of money involved at the Ephesos fair seems too large to accommodate only small-scale peasant transactions, and it is probable that regional trade of some magnitude was practiced there.⁶²

Money and Credit Mechanisms

In the eighth and ninth centuries there is, in Byzantium as in the West, but much less than in the West, a climate of hostility toward lending at interest, stemming from ideological grounds. The *Ecloga* does not explicitly forbid it, but incorporates no provisions for lending at interest, unlike its successor legislation, for example, the ninth-century *Ecloga Aucta* and *Eclogadion*, which restore the Justinianic interest rates, and even slightly increase them because of a technical adjustment. A canon of Patriarch Tarasios (790), punishing laymen as well as ecclesiastics who lent at interest, is the clearest indication that lending at interest was being practiced during the iconoclastic period.⁶³ It must be noted that there is no explicit imperial legislation forbidding loans at interest until late in the ninth century, when Basil I passed a short-lived measure.

In practice, it is possible that there was a certain hostility toward lending at interest, which may have led people, and our sources, to conceal the practice. A number of hagiographic sources mention loans, without, however, breathing a word on interest, which may have been concealed in the contracts.⁶⁴ The most interesting text of this period is the *vita* of Theophanes Confessor of the early ninth century, written by Methodios, patriarch of Constantinople (843–847). The saint tried to buy a piece of land, sold by a peasant. The right of *protimesis* was exercised, but Theophanes had no money. He turned to his relatives, but they did not want to make a loan to him, fearing that they would never recover it. The problem was solved by a kind of double borrowing, whereby some monks borrowed “from some people, on their own account,” and then loaned it (*ἀντεπεδάνεισαν*) to Theophanes. The loan consisted of 2.5 pounds of gold, or 180 nomismata, a very considerable sum, which Theophanes was eventually able to repay, presumably by selling the products of this land. No interest on the loan is mentioned, but the size of the sum suggests that the interest may have been hidden in the sale price.⁶⁵

⁶² Ibid., 84 n. 107.

⁶³ J. B. Pitra, *Juris ecclesiastici Graecorum historia et monumenta* (Rome, 1868), 2:311. For the relevant legislation of Patriarch Nikephoros I (806–815), see A. E. Laiou, “Economic Thought and Ideology,” *EHB* 1138. The slight technical increase in the interest rate (12.5%, 8.33%, 6.25%, 4.2% instead of 12%, 8%, 6%, 4%) in fact goes back to Justinian I. It is an unavoidable result of the quotation of the interest rate in subdivisions of the gold coin (as in Novel 32). The rate of 12% etc. is quoted when the interest rate is expressed in percentages, as in *CI.* 4.32, 36 = *Bas.* 2.3.74. D. Gofas, “The Byzantine Law of Interest,” *EHB*, accepts the higher rate as normal since the time of Constantine I.

⁶⁴ For the documentation, see Laiou, “Church.”

⁶⁵ V. V. Latyshev, *Methodii Patriarchae Constantinopolitani Vita S. Theophanis Confessoris* (St. Petersburg, 1918), 17; cf. Kaplan, *Les hommes et la terre*, 411–12.

Trade associations are a different matter, since they carry no ideological burden. The Byzantines made use of provisions of Roman law to form associations, *κοινωνία* or *χρεωκοινωνία*, which spread the risk between investor and trader. The *Rhodian Sea Law* describes the provisions for such contracts in detail, which suggests their widespread use in Byzantium, long before they appeared in western Europe in the form of *commenda*, the type of contract on which western European maritime trade is based in the eleventh century. Both the two-sided association and the unilateral one, in which the traveling party put up only his labor, are known at the time of the *Rhodian Sea Law* and the *Ecloga*. In a risky period, where the seas were full of pirates, this risk-sharing and risk-spreading, was a good way of doing business. Indeed, R. S. Lopez has called the *χρεωκοινωνία* the most important new idea of the seventh century.⁶⁶ It is tempting to see the great variety of amphoras found in the shipwreck of Yassi Ada as the investments of merchants, receiving goods from a large number of investors.⁶⁷

It is in this light that one should see the “vexations” of the economist-emperor Nikephoros I that have to do with commerce and lending at interest, especially the tenth vexation. What the emperor is said to have done was to have made compulsory loans to the most important *naukleroi* of Constantinople, to each of whom he loaned 12 pounds of gold at a rate of 16.6%. They were to continue paying the tax on trade, the *kommerkia*.⁶⁸ There is, here, a clear effort to support the activities of the most viable shipowners/merchants. The interest, higher than the 12% allowed for maritime loans by the legislation of Justinian I, is, interestingly enough, the unofficially recognized maximum in the twelfth century, but it may already have been normal as early as 790.⁶⁹ In the early ninth century, it may reflect both a shortage of capital and the high risks of maritime trade. At the same time, the emperor seems to have forbidden interest-bearing sea-loans made by individuals. In this measure, one may see an effort to increase state control of Constantinopolitan maritime trade as well as of the revenues thereof; see, for example, his rescinding of the measure of Empress Irene, who had reduced the *kommerkia* of Abydos and Hieron, and his reimposition of a tax of 2 nomismata per head on slaves coming into Constantinople from Abydos.⁷⁰

The picture presented here stumbles against a considerable obstacle. If the peasants paid their taxes in specie, they must have sold their produce for cash; if local trade, small-scale though it may have been, existed, it would have been based either on barter or on monetary exchange, and monetary transactions are mentioned in virtually all

⁶⁶ Lopez, “Role of Trade,” and A. E. Laiou, “Byzantium and the Commercial Revolution,” in *Europa medievale e mondo bizantino: Contatti effettivi e possibilità di studi comparati*, ed. G. Arnaldi and G. Cavallo (Rome, 1997), 239–53.

⁶⁷ See F. van Doorninck, Jr., “Byzantine Shipwrecks,” *EHB* 901, with, however, a different interpretation.

⁶⁸ This is the interpretation of A. Christophilopoulou, *Βυζαντινή Ιστορία* (Athens, 1981), 2:170–71.

⁶⁹ A. E. Laiou, “God and Mammon: Credit, Trade, Profit and the Canonists,” in *Byzantium in the Twelfth Century*, ed. N. Oikonomides (Athens, 1991), 279.

⁷⁰ Theophanes, ed. de Boor, 1:486–87, 475. Cf. Oikonomides, “Role of the Byzantine State,” 986–87.

the sources I have discussed.⁷¹ But it has been observed that in the provinces there are extremely few copper coins found in urban archaeological sites, from the early/middle seventh century until at least two hundred years later. Indeed, this fact is at the center of the theories of total demonetization of the Byzantine economy in areas outside Constantinople, until the tenth century or so.⁷² Such theories are seductive and have the advantage of accommodating the archaeological record, although not the other sources that have been used here, which show a continuous use of coinage.⁷³

The question, put bluntly, is as follows: either the economy was demonetized and all that has been said above is a misapprehension, or the economy was not completely demonetized. The economy was not completely demonetized: coins, including copper ones, were struck throughout this period,⁷⁴ although the closing down of provincial mints must be connected with a decreased use of coins; the real question then becomes a matter regarding the circulation of copper coins. The historian can fall back on the statement that the archaeological record is neither unproblematic nor capable of a single interpretation.⁷⁵ But it is also possible to argue that what was happening was a certain demonetization of copper, reflected in the fact that copper coins are not found in excavations in large numbers. On the other hand, the silver coin was stabilized with the reform of Leo III,⁷⁶ which may signal an improvement overall in the economic situation of the empire; certainly it changed the situation with regard to the silver coin, which had been rare since the seventh century. Silver coins may, to some extent, have replaced copper ones. Between 825 and 835 there was a major reform of the copper coinage, with the introduction of the heavy follis, which remained the type used throughout the Macedonian period. There was a very large issue of this follis, and Philip Grierson has suggested that there was a general recoinage of copper, which would probably be sufficient to explain the dearth of copper coins in sites of the earlier period.⁷⁷

It is, in any case, clear that, in the economic conditions of the seventh and eighth

⁷¹ See also N. Oikonomides, "Σέ ποιά βαθμό ήταν εκχρηματισμένη η μεσοβυζαντινή οικονομία," in Ροδωνιά (Rethymnon, 1994), 2:365, for the 8th century; note, however, that the cash transactions mentioned here took place in Constantinople, not in the provinces.

⁷² The most recent and focused interpretation is that of Hendy, "From Antiquity," 353ff (ca. 610–ca. 830); it is shared by Haldon, *Seventh Century*, 117ff, and, occasionally, by Oikonomides in, for example, "Le marchand," 639, with reference to Greece. Haldon notes, however, that "the numismatic evidence suggests a marked upswing of monetised exchange during the first half of the ninth century, especially during the 830's and 840's": "Synônê," 139 n. 65, with reference to P. Grierson, *DOC* 3.1:94ff. This indeed argues for an increased production of coins during the reign of Theophilos, as well as a reform in the copper coinage.

⁷³ Cf. also the 7th-century *vita* of St. Alypius, where people go to the city to change large-denomination coins into smaller ones: Oikonomides, "Σέ ποιά βαθμό," 368–69. On what follows, see the extensive discussion by C. Morrisson, "Byzantine Money: Its Production and Circulation," *EHB* 946ff, 956ff.

⁷⁴ Grierson, "Coinage and Money," 446 n. 88.

⁷⁵ Russell, "Transformations," 137–54.

⁷⁶ Hendy, *Studies*, 500ff; Morrisson, "Byzantine Money," 925–26.

⁷⁷ P. Grierson, *Byzantine Coins* (London, 1982), 183. C. Morrisson informs me, however, that such an argument might hold for coins found in hoards, but not for those found in excavations, whose dearth is at issue here.

centuries, the use of money was greatly reduced, as can be seen also by the highly simplified monetary system of the Isaurian period. What is equally clear is that exchange transactions that involved monetary mediation existed, although at a fairly low level. A case in point is the Bulgarian treaty of 716, whose renewal was discussed in 812: 30 (or 50) pounds of gold as the total annual value of the luxury exports to Bulgaria is a risible sum; by comparison, in 944 each Russian trader was allowed to export from Constantinople silks of a value of 50 gold coins, and in that case money, rather than bullion, is clearly meant.

The early ninth century witnessed a number of changes: the reforms of Nikephoros I on the economic front; on the political front, the treaty with the Bulgarians in 815, inaugurating a thirty-year peace with all the benefits that resulted to trade; at the other end of the state, the failure of Charlemagne to detach Venice from the empire has a symbolic significance, and, for the development of Venice, a real one as well. Finally, the monetary reform of the 820s marked the fact of a real change in the monetary economy and in the economy of exchange; and the reopening of the mint in Thessalonike in the 820s must be seen as a quickening in the economy of exchange.⁷⁸

Unsurprisingly, the rich merchant, as well as the idea that one can become rich through trade, begins to appear in the sources. These are people who were making money through trade without forming part of an administered trade network, and without being exceptional or extremely wealthy individuals. The *keroularios* (chandler) who was relieved of almost 98.5 pounds of gold during the reign of Nikephoros I is a well-known example of people making their money by selling the products of their trade.⁷⁹ At approximately the same time, the anonymous *vita* of Theophylact of Nikomedeia says that in this provincial town fathers urged their sons to engage in trade great and small, seeking profits from this activity, instead of studying holy scripture.⁸⁰ The assertion that one can make money from trade, and that laymen were beginning to present this to their children as a viable career option, surely brings us to the borderline between a period where exchanges, although present to a greater extent than is currently admitted, were nonetheless low, and where money was probably mostly to be made in regulated or administered trade, to a situation where entrepreneurial trade and regulated trade continued to coexist, but where there was much greater scope for both.

The Ninth and Tenth Centuries (ca. 820s–ca. 1000)

A new period begins in the early ninth century with the economic events just outlined. In terms of the economy of exchange, it is not easy to establish a precise point where the accumulation of changes becomes qualitative and thus brings the period to a close.

⁷⁸ Hendy, *Studies*, 425. For the changes of the first quarter of the 9th century, cf. Oikonomides, "Role of the Byzantine State," 990ff, and Morrisson, "Byzantine Money," 914, 926, 959ff.

⁷⁹ Theophanes, ed. de Boor, 1:487–88.

⁸⁰ F. Halkin, "Vie de St. Théophylacte de Nicomédie," in *Hagiologie byzantine: Textes inédits publiés en grec et traduits en français* (Brussels, 1986), 175.33–35. The terms used in this text to describe trade are ἐμπορία, πραγματεία, and καπηλεία.

The great novel of Basil II, of 996, with its chapter on fairs, is an indicator of the importance of commercial exchange, while the privilege he granted to the Venetians in 992 marks a significant step in the rising influence of Italian merchants, destined to become highly visible a hundred years later. Thus we arrive at a turning point at about the year 1000.

The ninth and tenth centuries are marked by a revival in the political fortunes of the empire, which begins to take the offensive against its numerous enemies in a process that was slow and full of reversals until the late ninth century, but which ends with the highly successful campaigns of Nikephoros II Phokas, John I Tzimiskes, and Basil II.⁸¹ This political upturn is coincidental with an economic recovery. Indeed, some aspects of the military-political stabilization and expansion had direct economic consequences. Increased security within the frontiers of the empire meant that peasants could cultivate their fields without the constant risk that the fruits of their labor would be appropriated by the enemy or that their productive resources would be destroyed by raids; the population increase owes a great deal to security.⁸² The sack of Thessalonike by the Arabs in 904, and the consequent decline in the commerce of the city, are indications *a contrario* of the importance of security. Similarly, with regard to the sea-lanes, Arab piratical incursions had much increased the risks of maritime trade and continued to do so until the recapture of Crete by the Byzantines in 961. Although maritime trade had continued throughout the period, it had been shaped by Arab raids into short-range activity; with the recovery of Crete, the risks were correspondingly reduced.⁸³ The acquisition of large areas increased not only state revenues from the captured areas, nor only the size of the internal market, but also the potential of exchange, since some territories specialized in certain products, for example, Bulgaria in linen and honey. Thus the global wealth of the empire increased, and so did the possibilities of commerce.

Furthermore, the drain of liquid resources (coined money, silks, gold, and silver) into the treasuries of other states or into the hands of other peoples decreased and was eventually reversed. In the seventh and eighth centuries, the Byzantines had lost resources in the form of war booty or of gifts given to Arabs or Bulgarians in exchange for peace or for the return of prisoners—a one-way export of resources. By the late tenth century, the situation had been completely reversed. True, the great campaigns

⁸¹ For the early part of the revival, see W. T. Treadgold, *The Byzantine Revival, 780–842* (Stanford, 1988). For the history of trade, along with the works mentioned in note 1, see E. Patlagean, “Byzance et les marchés du grand commerce, vers 830–vers 1030: Entre Pirenne et Polanyi,” in *Mercati e mercanti* (as above, note 1), 587–632.

⁸² For an example of the destruction of productive resources on both Byzantine and Bulgarian territory during the reign of Krum, see, for example, Iadevaia, *Scriptor incertus*, 27–31, 50–57. For the importance of increased security in the agrarian economy, see J. Lefort, “The Rural Economy, Seventh–Twelfth Centuries,” *EHB* 269–70.

⁸³ Cretan pirates were still active as far north as the Chalkidike when St. Athanasios first went to Mount Athos in 957 or 958: *Vitae duae antiquae Sancti Athanasii Athonitae*, ed. J. Noret (Leuven, 1982), A, para. 38. On the effects of Arab raids not only on sea trade but also on port cities, see Ahrweiler, “Ports,” 272, noting raids against Thessalonike, Durrazzo, and Ephesos.

also meant high expenditures. At the same time, however, there was considerable influx of resources in the form of war booty. When John Tzimiskes captured Emet, in Syria, he received great ransoms for prisoners. In 972, when he took Majafarkin (Martyropolis), the inhabitants gave him rich presents in gold, silver, and gold-embroidered cloth. The city of Ecbatana, “which got money from many areas, and which had never been captured by enemies,” held incredible wealth in its treasury: τῶν ἄλλων πόλεων μᾶλλον . . . πολυόλβον, καὶ πολύχρυσον . . . τελεῖν. Tzimiskes was not able to take it, but he received as “gifts” from the Muslims the equivalent of 3,000,000 (μυριάσι τριακοσίαις) coins in gold and silver; when he returned to Constantinople, he held a great triumph in which the captured gold, silver, spices, and silk cloth were displayed to the admiring inhabitants in a triumphal procession in the forum.⁸⁴ No wonder Basil II left, upon his death, a treasury so full that it impressed not only Michael Psellos but also the Muslims: a late eleventh-century Arab source informs us that “When Basil, son of Romanos, the emperor of Byzantium, died . . . he left ten thousand qintars of gold coins (= 1,000,000 pounds or 72,000,000 gold coins) and jewels worth 54 million dinars.” Michael Psellos gives a figure of 200,000 talants, or litrai of gold in cash, that is, 14.4 million gold coins.⁸⁵

Noneconomic Exchange

The fact that Byzantium became very wealthy indeed as a state does not necessarily inform us about the structure of its economic activities or about the structures and forms of exchange. To begin with, a question must be posed regarding the extent and weight of noneconomic exchange. That such exchange existed in this period is beyond any question. That it was an important instrument of Byzantine diplomacy is vouched for by none other than Constantine VII, who outlined the ideological reasons behind the prohibition of the export of some items, namely, high-quality silks reserved to the emperor.⁸⁶ The items involved in international exchange of this kind were several: textiles were perhaps the most important, especially with regard to the West, but so were works of art: objects made of gold, silver, and precious metals and, to a much more limited extent, icons and luxury manuscripts.⁸⁷ It is undoubted that in absolute

⁸⁴ *Leonis Diaconis Caloënsis Historiae*, ed. C. B. Hase (Bonn, 1828), 160–63.

⁸⁵ Qaddūmī, *Gifts*, account 340; O. Grabar, “The Shared Culture of Objects,” in *Byzantine Court Culture from 829 to 1204*, ed. H. Maguire (Washington, D.C., 1997); M. Psellos, *Chronographie*, ed. E. Renauld (Paris, 1926), 1:19.

⁸⁶ *De Administrando Imperio*, ed. G. Moravcsik and R. J. H. Jenkins, 2 vols. (London–Washington, D.C., 1962–67), chap. 13 (hereafter *DAI*).

⁸⁷ See several articles in Shepard and Franklin, *Byzantine Diplomacy*, namely, R. Cormack, “But Is It Art?” 218–36; J. Lowden, “The Luxury Book as Diplomatic Gift,” 249–60; Muthesius, “Silken Diplomacy,” 237–48, discuss some silk cloth that arrived in the West by means of diplomacy. One piece, the Durham “Nature Goddess,” seems to be of 8th–9th century manufacture. Byzantine glass and rock crystal objects, as well as enamels and jewelry, reached the West as presents, as the dowry of Theophano, or much later as booty from the Fourth Crusade: J. Philippe, “Sur la question byzantine en matière de verrerie et de crystal de roche,” and J. Lafontaine-Dosogne, “Email et orfèvrerie à

terms the value of the gifts made by the emperors of this period much exceeds those made by their poorer predecessors. However, especially with the East, there was an elaborate ceremonial whereby the niceties of true gift exchange were observed, so that gifts from the Byzantines to the caliphs, for example, had to be matched by counter-gifts.

The eleventh-century *Book of Gifts and Treasures* registers a number of exchanges in the period under discussion, and some of the details speak to important aspects of non-economic exchange. Emperor Theophilos' gift to al-Mamun was more than matched by counter-gifts of the caliph, who topped off his generosity with an extra gift of musk and sable furs.⁸⁸ All of this works very well with the theory of the gift. So, in a different vein, does the fact, reported by Theophanes Continuatus, that on a later occasion, significantly, after the Byzantine defeat at Amorion, when Theophilos tried to free some captives with 200 kentenaria of gold (1,440,000 gold coins), the emir would not accept it, since in the past Theophilos had sent as a gift 1,000 kentenaria—both figures must be greatly exaggerated.⁸⁹ If this highlights the theory of gift exchange, and some of the inherent dangers of lavish gift giving, the account of the gifts sent by Romanos I to the caliph during peace negotiations gives an idea of the economic import of such gifts and of the objects involved. The text features vessels of gold, silver, and rock crystal, beakers, buckets, and caskets made of silver, all decorated and inlaid with pearls and precious stones. Knives and axes, with handles decorated with jewels, are eye-catching. But most important and lovingly described are the textiles: brocades with floral and animal designs; scarlet, multicolored, and white *siqlatun* cloth; cut velvet covers; thin green brocade (*sundus*) with patterned designs; velvet garments with designs, and so on.⁹⁰ The quantities are not to be taken literally. On the other hand, there is a certain diversity in the numbers (ranging from a single garment of *siqlatun* cloth decorated with birds in the border to multiple entries of ten to twenty pieces of textiles), which may suggest that the quantities are not entirely fictional. If we were to stay only with the garments or textiles made of silk and velvet, Romanos would have sent

Byzance au Xe–XIe siècle et leur relation avec la Germanie,” in *Kunst im Zeitalter der Kaiserin Theophanu*, ed. A. von Euw and P. Schreiner (Cologne, 1993), 49–61, 61–74. Constantine VII explicitly stated that enamels were manufactured as gifts for “barbarians”: Lafontaine-Dosogne, *op. cit.*, 64.

⁸⁸ *Theophanes Continuatus*, 96, makes clear the emperor's reasoning, which was that important gifts impressed the Arabs with the wealth and power of the Byzantine state and were an old custom. Theophilos was also very generous to his own subjects: see Treadgold, *State Finances*, 84–85. Michael III is said to have made to individual Byzantines presents amounting to 4,133,000 nomismata, with the result that his successor found only 3 kentenaria of gold in the treasury: *Theophanes Continuatus*, 255–56.

⁸⁹ *Theophanes Continuatus*, 96–97, 131; Qaddūmī, *Gifts*, account 31.

⁹⁰ Qaddūmī, *Gifts*, accounts 73–74; Grabar, “Objects”; A. A. Vasiliev and M. Canard, *Byzance et les Arabes*, 3 vols. (Brussels, 1935–68), 2.1:278–79. On *sundus* (σιδόνια, σενδέες), see D. Jacoby, “Silk in Western Byzantium before the Fourth Crusade,” *BZ* 84/85 (1991–92): 458–59. On *siqlun* or *siqlun*, N. Serikoff, who is compiling a dictionary of Arabic loanwords from Greek, had the kindness to inform me that the term refers to woolen cloth and also “colored cotton cloth,” similar to imprinted silk. He mentions that one author (Ibn Durayd) states that an old Byzantine lady, who was shown a woolen covering and asked what it was called in Greek, answered “sigillatis.”

a total of 107 very valuable pieces, plus “ten kerchiefs with images.”⁹¹ The caliph sent a comparable countergift.⁹²

The cost of such presents is not easy to calculate. The same book discusses two gifts sent by Leo VI to the governor of Azerbaijan and Armenia: “Rumi garments of furfur (purple) brocade woven with gold,” each of which was worth 2,000 dinars (the dinar was of somewhat lesser weight than the nomisma); a girdle was decorated with 2,000 mithqals of gold “inlaid with enamel,” and cost 10,000 dinars. Obviously, in the case of the girdle, the decoration holds the secret of the value. But is 2,000 dinars a totally fictional order of magnitude for the value of a gold-and-purple garment? It is certainly higher than the figures we have for silks on the market, but these were, after all, imperial gifts.⁹³ In any case, it is not so much the economic outlay that interests us here, since, if countergifts were important, the “balance of payments” of this gift-exchange cannot have been negative for Byzantium even in economic terms, let alone political ones.⁹⁴ What is of greater interest is the question of the role of this noneconomic exchange in the broader economy; that is, how much of the production of the empire was “decommodified” by being in the realm of noneconomic exchange? In this period of political expansion, I think that the information we have does not suggest that gifts to foreigners, by their nature occasional, implicated much of the production of luxuries, especially silk cloth. On the other hand, internal gifts,⁹⁵ to the church and above all to dignitaries, which are described in such detail by the *Book of Ceremonies* and Liutprand of Cremona, undoubtedly meant that a substantial part of the silk production of the imperial workshops did not enter the circuit of commercial exchange. Together with the prohibition of the export of purple silks, this surely meant that noneconomic

⁹¹ A. Muthesius and D. Jacoby both say that the silks sent abroad (to the West?) were used, or of second quality. One should, however, take into account the fact that silks that had been worn by the emperor had an added political and ideological value.

⁹² Cf. also the arrival of a Byzantine envoy at the court of the Fatimid caliph al-Mu'izz to bring the annual tribute for Calabria and negotiate a truce: “he brought with him many presents, vessels of gold and silver inlaid with jewels, embroidery, silk, nard and other precious articles of theirs.” A. Tibi, “Byzantine-Fatimid Relations in the Reign of Al-Mu'izz Li-Din Allah (R. 953–975 A.D.) as Reflected in Primary Arabic Sources,” *Graeco-Arabica* 4 (1991): 191.

⁹³ For the price of Byzantine silks on the Egyptian market, see A. Muthesius, “Essential Processes, Looms, and Technical Aspects of the Production of Silk Textiles,” *EHB* 166.

⁹⁴ Cf. also the Byzantine embassy to Baghdad in 917, which brought enormous “gifts”—involuntary ones, to be sure—for the ransom of 1,586 people. Even in this case, countergifts were considered de rigueur; they went to the ambassadors: Qaddūmī, *Gifts*, accounts 161–64. Vasiliev-Canard, *Byzance et les Arabes*, 2.2:169–71, 239–43: the Byzantine ambassadors received as a gift “vêtements d'honneur” and 50,000 dirhams each. There was an exchange of embassies, resulting in the ransom of 5,500 Muslims. The Muslim ambassadors received from the caliph a global sum of 170,000 coins “for the voyage.”

⁹⁵ Among numerous other possible examples, see the gifts of Michael Rangabe to the church: 75 pounds of gold to the patriarch and 125 pounds to the clergy, as well as golden vessels studded with stones, and cloth of gold and purple, i.e., the same kind of items used for gifts to foreign dignitaries and rulers: Theophanes, 1:493–94. Constantine VII also, on the occasion of his Broumalia, made gifts of money, purple cloth, and aromatic woods: *Theophanes Continuatus*, 457. See also the gifts of Nikephoros II to Mount Athos, Noret, *Vitae duae*, A, para. 70, 71, 104; B, para. 22, 23, 34, 39.

exchange played an important role. One must, nevertheless, remember that in the tenth century the emperor who went on campaign was advised to purchase in the marketplace (ἐξ ἀγορᾶς ἀπὸ τοῦ φόρου) silk cloth for gifts to noble foreigners—a sure mark of the commercialization of silk production.⁹⁶

Economic Exchange

Silk Noneconomic exchange did not play a dominant role, even for silk. Alongside the noneconomic exchange there was trade, heavily controlled by the government, to be sure, but nevertheless solidly within the realm of economic exchange. Best-quality silk was among the items whose export outside the frontiers of the empire was forbidden: these *kekolymena* include wheat, iron, arms, wine, olive oil, salt, and gold. The production of best-quality purple silk outside the imperial workshops was also forbidden.⁹⁷ The purchase and sale of silk cloth and garments were severely controlled, with separate guilds handling Syrian and non-Syrian trade.⁹⁸ The distinction was strictly maintained between manufacturing silk cloth and buying or selling silk.⁹⁹ The purchase of silk imported into Constantinople and the purchase of Syrian silks were carried out by the merchants of the appropriate guild (the *prandiopratai* and the *metaxopratai*—merchants in raw silk), acting in tandem, and in the form of a trade association, each member contributing what he could.¹⁰⁰ The raw silk merchants could buy the raw silk bought from outside Constantinople, but did not themselves have the authority to travel outside the city to get it—possibly in order not to jeopardize the activities of the provincial merchants and landlords who were selling the silk. The guild structure of Constantinople and of the silk industry has already been discussed.¹⁰¹ We are here concerned only with the trade aspects.

In Constantinople, this is a regulated world, certainly in intent, unsurprisingly less so in practice: Liutprand of Cremona, in a statement that certainly smacks of bravado but is nevertheless possibly true, says that one could buy forbidden silks on the markets of western Europe (from the Venetians) easily enough.¹⁰² Besides, Leo VI had already

⁹⁶ *Constantine Porphyrogenitus, Three Treatises on Imperial Military Expeditions*, ed. J. F. Haldon (Vienna, 1990), 112.

⁹⁷ *Das Eparchenbuch Leons des Weisen*, ed. J. Koder (Vienna, 1991), 4.1, 4.8, 18.2, 8. 5. On silk, cf. Dagron, “Urban Economy,” 438–44.

⁹⁸ Koder, *Eparchenbuch*, 4 and 5, and cf. below, foreign trade, 723–25.

⁹⁹ Koder, *Eparchenbuch*, 6.14. Jewish merchants, who were engaged in long-distance trade between the Far East and western Europe, through the Byzantine Empire, are forbidden to buy raw silk in Constantinople, although they may sell it: *ibid.*, 6.16; D. Jacoby, “Les juifs à Byzance: Une communauté marginalisée,” in *Οι Περιθωριακοί στο Βυζάντιο* (Athens, 1993), 135–36.

¹⁰⁰ Koder, *Eparchenbuch*, 5.3, 6. 8. Cf. also *ibid.*, 7.4, asserting that the *katartarioi*, those who process silk, should not buy it on their own but in association with the *metaxopratai*, basically so that the price will not rise or fall as a result of their actions.

¹⁰¹ *Ibid.*, 6. 5. See the contributions by Dagron, “Urban Economy,” and Muthesius, “Essential Processes.”

¹⁰² Liutprand of Cremona, *Legatio*, in A. Bauer and P. Rau, *Quellen zur Geschichte der sächsischen Kaiserstadt* (Darmstadt, 1977), 572–74.

allowed the sale of small pieces of purple (imperial, normally forbidden) silk to his own subjects, so that they could enjoy some of the luxury involved.¹⁰³ This statement, although it may simply mean that the emperor gave official permission to something that was already happening, nevertheless underlines the political importance of certain types of silk. In any case, if one excludes for the moment the provincial manufacturing of silk,¹⁰⁴ one must admit to a trade that took place in Constantinople and that was highly controlled. What was controlled, interestingly enough, was not the price of either the raw silk imports or the silk cloth. Silk cloth worth above 10 nomismata was supposed to be reported to the city eparch, undoubtedly so that it would not be sold to the wrong people—so we may take this figure as indicating a certain threshold above which silk becomes very valuable. But nothing regulated the price of garments or of raw silk imports; what was regulated was the mechanism of trade, that is, the collective bargaining that obliterates competition both between guild members and between different guilds. Thus it is stated that if an individual raw silk merchant had managed to buy silk from outsiders (i.e., those who bring it into Constantinople), he was supposed then to sell it to poorer members of the guild (presumably at their request); his commission, that is, his profit, was set at one ounce per nomisma, that is, one miliaresion, or 8.33%. So this was a controlled trade where prices were not set by the state, but the process of arriving at prices was governed by the state. As far as I can see, the answer to the crucial question of the mechanism through which the price of (nonpolitical) silk is set must be a controlled market mechanism—where a number of the conditions in which a market took place was established by the government, and where ultimately prices were determined between buyers and sellers with government control of the rate of profit on resale.

Such is the case with silk. What about other commodities? Grain is, of course, the other major commodity, which has some similarities and some differences with silk: grain is a staple, whereas silk is a luxury; but both are considered important by the state, one because of the political cost of having large urban populations (primarily that of Constantinople) starving or rioting if bread prices are high, and the other because of its prestige and its political as well as economic function.

Grain In the case of grain, there seems to be a complex relationship between economic and noneconomic distribution, which works in ways different from those affecting silk. For one thing, one must distinguish between the Constantinopolitan market and that of other cities and towns. Constantinople is a special case because it had by far the highest demand and could least afford bread riots. It is also the city where there was concentrated buying power, by the state and by individuals, and where one

¹⁰³ *Les Nouvelles de Léon VI le Sage*, ed. P. Noailles and A. Dain (Paris, 1944), Nov. 80.

¹⁰⁴ See below, 722, on Danelis; there was also, in the second half of the 10th century, the production of textiles (silks) in Sparta: *The Life of St. Nikon*, ed. D. F. Sullivan (Brookline, Mass., 1987), 118–20. For the very considerable production of silk in Byzantine Italy, see A. Guillou, “La soie du katépanat d’Italie,” *TM* 6 (1976): 69–84, reprinted in idem, *Culture et société en Italie byzantine, VIe–XIe s.* (London, 1978), art. 12.

might find some grain not subject to market forces. It is, finally, the city for which we have the most information. Certainly, as the population increased in the ninth and tenth centuries, the demand for grain also increased. Some grain was, probably, collected in the warehouses of monasteries or churches, and some must have been distributed to the poor as alms.¹⁰⁵ A great deal of grain was kept in the imperial warehouses, from which it could be and was sold to the population, although the one mention we have of that operation is at a time of famine; and it is possible that great landowners who lived in Constantinople (and, respectively, in other urban centers) had their own production, and therefore that their own provisioning in grain was outside the market. There was also, however, grain trade. Mention of “wheat-bearing ships” is frequent,¹⁰⁶ although the sources do not tell us whether the grain was tax grain, requisitioned or bought by the state, or bought and sold by merchants.

Surprisingly, perhaps, especially for those who see Byzantium as a completely controlled economy, the grain trade in this period does not seem to have been organized by the state, nor was the price of grain ostensibly regulated. Perhaps the demand was powerful enough to ensure that merchants (or others, selling both their own estate production and the production of others)¹⁰⁷ would bring grain to the city; but that in itself presupposes a relatively active trade. There was a functioning market for grain in Constantinople, as can be seen by the fluctuations of the price of grain depending on weather and other factors affecting supply, and also by the fact that bakers were allowed to respond to the price of grain: not by changing the price on a loaf of bread, but rather by adjusting its weight.¹⁰⁸ Such measures could accommodate only minor or temporary fluctuations in grain prices, however. So there was a market, but it was not an entirely self-regulating one. The state, individual emperors, highly placed individuals could and did all play a role in the availability of grain and the formation of prices.

¹⁰⁵ Cf. A. Harvey, *Economic Expansion in the Byzantine Empire, 900–1200* (Cambridge, 1989), 206; M. Kaplan, “Maisons impériales,” *Byzantion* 61 (1991): 340–64. Despite all that has been written on the subject, the question of the grain supply of Constantinople and its distribution remains an open one. See, for example, two articles in Mango and Dagron, *Constantinople and Its Hinterland*, that reach quite different conclusions. J. Durliat (“L’approvisionnement de Constantinople,” 19–34) thinks that both supply and distribution were controlled by the state, while P. Magdalino (“The Grain Supply of Constantinople, 9th–12th Centuries,” 35–48) thinks that 60% of the grain of Constantinople went through commercial channels. The difference may be due in part to the fact that one scholar sees the 10th century through the looking glass of the 6th, and the other through that of the 11th–12th centuries. On the provisioning of cities in this period and through the 12th century, see Dagron, “Urban Economy,” 445–53ff.

¹⁰⁶ See *Theophanes Continuatus*, 55, during the rebellion of Thomas the Slav. The large ship of Empress Theodora, wife of Theophilos, is considered by some to have been carrying grain: see Kaplan, *Les hommes et la terre*, 469.

¹⁰⁷ See the case of Lavra: Kaplan, *Les hommes et la terre*, 302–4. The monks of Lavra were not, of course, professional traders, and they functioned under better conditions than traders, since some of their ships were tax exempt up to a point.

¹⁰⁸ Koder, *Eparchenbuch*, 18.1 and 4. When the price of grain rises or falls, the bakers go to the authorities, who decide on the weight of the loaf. The price of the bread is not regulated by the state, but the profit of the baker is (1 keration to the gold coin over the price of the grain and expenses, i.e., a pure profit of 4%).

Imperial grain, presumably produced on imperial estates and stockpiled in Constantinople, could be brought into service to alleviate famine, as happened during the reign of Basil I, who sold imperial grain to the population at normal prices, although the supply had been temporarily cut off.¹⁰⁹ In the period just before and during the reign of Nikephoros Phokas, state intervention in the grain supply was particularly active. The *parakoimomenos* Joseph Bringas, trying to rouse the people against Nikephoros Phokas, is said to have ordered the bakers not to make or sell bread.¹¹⁰ A little earlier, in 960, the same Joseph Bringas, faced with a dearth of grain that had tripled its price, “sent agents to East and West, to ‘drive out’ the collectors of the *synone* and the commercial ships, and to stop the merchants from stockpiling.”¹¹¹ The price then fell to 7–8 modioi of wheat per nomisma. Nikephoros Phokas is accused of stockpiling grain in the imperial warehouses and selling it exceedingly dearly at a time of famine; but the anecdote of the old soldier who complained that he could now carry on his own shoulders the grain bought for 2 nomismata, while in times past he needed two mules to carry what he had bought with one gold coin, suggests a more general price rise.¹¹² Wheat could also be commandeered: a Trapezuntine source, a collection of the miracles of St. Eugenios, claims that, during the civil war with Bardas Phokas, Basil II ordered grain to be sent to the capital from all of the Black Sea towns, up to Trebizond.¹¹³ Thus the Constantinopolitan grain market was, in that period, influenced by government action.

As for what went on in the provinces—how grain was marketed—that is fairly unclear. The case of Thessalonike in the early tenth century suggests the obvious fact that the city depended for its provisioning to a considerable extent on the surrounding countryside.¹¹⁴ Some of this trade may well have been what has been called “tied” trade, that is, the products may have been marketed by landowners, lay and ecclesiastical, through agents. The large estates that proliferated in the latter part of this period undoubtedly had a surplus that was thrown on the market. A few indications suggest that at least part of the surplus was marketed by the producers or their agents. The monks of Lavra had tax-exempt ships, on which they engaged in trade of their own production and resale of the production of others.¹¹⁵ In the early part of the period, Patriarch Methodios (843–847) complained that monks frequented the marketplace,

¹⁰⁹ *Ioannis Scylitzae Synopsis historiarum*, ed. H. Thurn (Berlin–New York, 1973), 277–78 (hereafter Skylitzes).

¹¹⁰ *De cerimoniis aulae byzantinae*, ed. J. J. Reiske, 2 vols. (Bonn, 1929–30), 1:96 (1:435–36) (hereafter *De cer.*); cf. Skylitzes, 257.

¹¹¹ *Theophanes Continuatus*, 479: “ἐξελάσαι συνωνὰς καὶ ἐμπορευτικὰ πλοῖα.” I would happily emend συνωνὰς to σιτώνας. Symeon Magistros, in *Theophanes Continuatus*, 759. Cf. other measures by Romanos I: Skylitzes, 225, and *Theophanes Continuatus*, 417–18, 431.

¹¹² Skylitzes, 273–74, 277–78. Cf. *Ioannis Zonaras Epitome historiarum*, ed. M. L. Dindorf and M. Büttner-Wobst, 6 vols. (Leipzig, 1968–97), 4:81–83, 87ff; 504–8, 513ff.

¹¹³ A. Papadopoulos-Kerameus, *Fontes Historiae Imperii Trapezuntini* (St. Petersburg, 1897), 81–82.

¹¹⁴ *Ioannis Cameniataes De excidio Thessalonicensi*, ed. I. Bekker (Bonn, 1838), 494–96, 562 (hereafter Kaminiates).

¹¹⁵ Kaplan, *Les hommes et la terre*, 302–4.

buying and selling the products of their lands.¹¹⁶ Liutprand of Cremona, in one of his sour moods, noted that the bishops “in all of Greece” (he actually was on the island of Leukas) themselves bought and sold (the products of their estates): he was trying to make a point about the lack of stature and the inappropriate behavior of these bishops, but if his comments mean anything they perhaps mean that the secular church of the provinces as well as monasteries were involved in the direct sale of agricultural products.¹¹⁷

The case of the widow Danelis is well known, but may be exceptional in the sense that she seems to have controlled so much territory that few other Byzantine aristocrats of the mid-ninth century could compete with her.¹¹⁸ On her estate she produced not only agricultural products. She must have had a veritable textile industry, making carpets as well as linen and silk cloth, of fine quality and, if we are to judge from her presents to Basil I, in considerable quantity.¹¹⁹ The question is, of course, what happened to all of this. She cannot have simply accumulated it; she must have sold it. But did she sell it through her own agents, in a form of tied trade, or did she sell it to intermediaries, that is, true merchants, who then resold it on the market? The answer to that question is not clear, nor is the extent of direct marketing of grain and other agricultural products by estate owners. It is, however, quite clear that only part of the production was marketed directly and that the presence of professional merchants was ubiquitous. In Thessalonike, Kameniates speaks of merchants in connection with the provisioning of the city.

Other Items of Exchange The other commodities that were traded, in Constantinople and elsewhere, are numerous; they include oil, wine, salt fish, meat, vegetables, other alimentary products, salt, timber, and wax.¹²⁰ Ceramics, linen, and woolen cloth were also items of trade. The sale of such commodities does not seem to have been regulated, that is, it must have functioned according to market laws, although perhaps with

¹¹⁶ I. Doens and C. Hannick, “Das Periorismos-Dekret des Patriarchen Methodios I. gegen die Studenten Naukratios und Athanasios,” *JÖB* 22 (1973): 98. I owe this reference to A. Kazhdan.

¹¹⁷ *Legatio*, chap. 63, p. 584.

¹¹⁸ The argument has been made many times: see Kazhdan, “One More Agrarian History of Byzantium,” *BSI* 55 (1994): 82; *Theophanes Continuatus*, 318–20; cf. Skylitzes, 161. One wonders, however, if she really was as exceptional as all that. The properties of the Maleinoi, for example, just about forty years after Danelis’ visit to Constantinople (which had taken place in 880), were immense. What happened to their production?

¹¹⁹ She brought to Basil I 100 pieces of *sendes* (σιδόνια), 300 pieces of very thin linen cloth, 100 pieces of wool/linen blend, and she eventually sent large and beautiful rugs to cover the floor of the Nea Ekklesia. She also gave Basil 100 skilled female textile workers. On the silk, cf. Jacoby, “Silk Trade,” 458–59.

¹²⁰ The sale of a large quantity of salt by the bishop of Helenopolis to a church, in Nicaea or Constantinople, is attested by a letter of Ignatios the Deacon. See Kazhdan, “Ignatios the Deacon’s Letters,” 198–99 (ep. 13). On vegetables, see J. Koder, “Fresh Vegetables for the Capital,” in Mango and Dagron, *Constantinople and Its Hinterland* (as above, note 34), 49–56, and on fish, G. Dagron, “Poissons, pêcheurs et poissonniers de Constantinople,” in *ibid.*, 57–73. On wine and oil in the Peloponnese, see M. Kordoses, “Τό εμπόριο στή Βυζαντινή Λακωνία (Θ’ αι.–1204),” *Πρακτικά τοῦ Α’ Τοπικοῦ Συνεδρίου Λακωνικῶν Μελετῶν* (Athens, 1983), 108–10.

a state-imposed rate of profit, at least in Constantinople. Slaves continued to be an item of trade well into the eleventh century.¹²¹ Luxury items such as silks, perfumes, and spices were important.

Foreign Trade International trade was practiced not only in Constantinople, which was, in that period and until the late twelfth century, an important entrepôt of the eastern luxury trade, but also in the other cities that functioned as centers of inter-regional and international trade.¹²² The importation of merchandise into and the activity of foreign merchants in Constantinople were strictly controlled, as was the travel of some merchants (for example, the raw silk merchants) outside the city to buy the merchandise.¹²³ Foreign trade in general was rather closely controlled, certainly in intent, to a considerable degree also in practice. The places of entry of merchandise were controlled. The commodities to be exported were controlled to some extent: the *kekolymena* could not be exported, and Leo VI forbade trade with Syria and Egypt.¹²⁴ Byzantine merchants, however, did trade with the enemy, except in times of crisis. Indeed, the Byzantine government, in the person of its generals on campaign, specifically encouraged merchants to travel into Muslim territories to collect intelligence.¹²⁵ The reference is, of course, to frontier areas such as Cilicia, Antioch, and the region of Aleppo. Less well known is the routine trade in necessities that took place along the eastern frontiers. The *Taktika* of Nikephoros Ouranos speaks of Byzantines, great and small, who “covet profit” (ἀγαπῶντες τὰ κέρδη), and who sent to besieged Syrian fortresses much grain, sheep, and other victuals.¹²⁶ The export of timber to the Muslims was forbidden, in order to impede their shipbuilding industry, a prohibition that the Venetians flouted, to their economic advantage. The Byzantines occasionally took issue with this, and in 971 they burned three Venetian ships loaded with wood, which were about to sail off to Mahdiyya and Tripoli.¹²⁷ As for the export of forbidden silks, that too seems to have been occurring toward the end of the tenth century. In a sense, the easing of

¹²¹ Saints’ lives of the 9th and 10th centuries frequently mention slaves, often as war captives. See also the many slaves of Danelis: *Theophanes Continuatus*, 318–20. For the 11th century, see the *vita* of St. Lazaros of Mount Galesion, *AASS*, Nov. 3: chaps. 8–9. On the slave trade in that period, see the classic work by C. Verlinden, *L’esclavage dans l’Europe médiévale*, vol. 2, *Italie: Colonies italiennes du Levant, Levant latin. Empire byzantin* (Bruges, 1977), and “La traite des esclaves: Un grand commerce international au Xe siècle,” in *Etudes des civilisations médiévales, IXe–XIIe siècles: Mélanges offerts à Edmond-René Labande . . .* (Poitiers, 1975), 721–30; cf. Patlagean, “Byzance et les marchés,” 596–98, 615–66. On trade in Constantinople, see Dagron, “Urban Economy,” *passim*.

¹²² See below, 726–28.

¹²³ Koder, *Eparchenbuch*, 6.12.

¹²⁴ Novel 63; *De re Strategica*, 42.7, ed. Köchly-Rüstow, 190; G. Dagron and H. Mihăescu, *Le traité sur le guerilla* (Paris, 1986), chap. 7, commentary on p. 249 and n. 40. J.-A. de Foucault, “Douze chapitres inédits de la *Tactique* de N. Ouranos,” *TM* 5 (1973): 296–99.

¹²⁵ Similar information is given by Ibn Hawqal, who says that Byzantine merchants were spying even in the interior of the Muslim territories; he claims that they made little profit from trade, but did much harm with their spying: Vasiliev and Canard, *Byzance et les Arabes*, 2.2:416.

¹²⁶ De Foucault, “Douze chapitres,” 297, 299.

¹²⁷ Tibi, “Byzantine-Fatimid Relations,” 96.

the prohibitions was developing even at the time the Book of the Eparch was issued. For, although this text explicitly forbids the sale of such cloth to foreigners or to anyone who might then resell it to a foreigner, after Leo VI relaxed the prohibition on the sale of small pieces of forbidden cloth to the citizens of Constantinople it could not have taken very long for private merchants to engage in the sale of such cloth to the West.

Nevertheless, foreign trade was highly controlled, at least into Constantinople itself and at least in the intent of the state.¹²⁸ It was regulated by treaties, such as the treaties with the Rus or with the Arabs. In the case of the Russians, what was controlled was the Byzantine exports, at least of important commodities such as silk. In 907 the Byzantines gave—or confirmed from an earlier treaty—to the inhabitants of a number of Russian towns, some grouped around Kiev, the right to enter Constantinople from a single gate, with an official escort, without arms and in groups of fewer than fifty men at a time; they were allowed to trade without paying any duty. In 944 these clauses were completed: the Russians were to live near St. Mamas, but not to winter there; they were not to export silk above 50 nomismata each, and if they bought silk, they were to have it sealed by an imperial official; both in 907 and 944, the emperor provided sustenance to traders and ambassadors. Merchants should have letters of accreditation. The treaty of 944 is the most interesting, but none of them tell us what the Russians brought. Arab sources and Constantine VII mention furs, honey, and slaves.¹²⁹ In general, the activities of the foreign merchants (and Byzantine merchants from outside the city) in Constantinople, their place of residence, and the merchants with whom they were in contact, were controlled and regulated.

In the border ports of entry, the situation may have been different. The Byzantine treaty with Aleppo, in 969–970, at a time, to be sure, when Aleppo had a special relationship with Byzantium, regulated only the duties for the importation of Byzantine merchandise into Aleppo (and from there, one assumes, into the Syrian market).¹³⁰ Interestingly, the imperial officials were to collect the duties on merchandise of high value that might also involve “forbidden” merchandise: gold, silver, brocade, raw silk, precious stones, jewels, pearls, fine silk cloth (*sundus*). The other imports, bulky or of lesser value, were to be taxed by the representatives of the emir; this included ordinary textiles, linen, silk cloth of different colors (*buzyun*), animals, and other merchandise. The issue was, I suspect, less one of the size of the revenues and more a matter of political control over sensitive commodities. This can be taken as a general statement for state control over foreign trade: political concerns, that is, the control of strategic commodities (silk cloth among them), was a paramount concern. Control of foreign trade was a prerogative of the government; it was exercised by decisions regarding the

¹²⁸ On the distinction between what obtained in Constantinople and what obtained in the provinces, see Oikonomides, “Le marchand byzantin,” and idem, “The Economic Region of Constantinople: From Directed Economy to Free Economy, and the Role of the Italians,” in *Europa medievale e mondo bizantino* (as above, note 66), 221–38.

¹²⁹ I. Sorlin, “Les traités de Byzance avec la Russie au Xe siècle,” *Cahiers du monde russe et soviétique* 3 (1961): 330–31, 346–50, 458, 448–49, 457, 475.

¹³⁰ M. Canard, *Histoire de la dynastie des H'amdaniides de Jazira et de Syrie* (Algiers 1951), 1:831–36, clause 20.

location of ports of entry, by decisions on how the movement of foreign merchants into Constantinople was to take place, by the levying of the import duties and the control of sensitive commodities. It did not extend to matters such as price and only sometimes affected the quantity of merchandise.

As for the items of foreign trade, the import items have already been discussed. The treaty with Aleppo gives an inkling of the items exported by the Byzantines, which certainly included (nonforbidden) silks, other textiles, jewelry, and bulk commodities such as animals. Textiles must have been by far the most important items of export. Byzantine silks were certainly imported into Egypt, as the Geniza documents show, and their price was relatively high.¹³¹ An Arab treatise mentions (along with silk, gold, silver, and red-leather utensils), pure gold coins, horses, locks, lyres, experts in hydraulic engineering, agronomists, marble workers, slaves, and eunuchs.¹³² Silks, whether from Byzantium or reexported from the Muslim Near East, appear also in Bulgaria and the West.¹³³

Trade Networks

We can distinguish various types of trade networks. Constantinople functioned as a local, regional, and interregional trade center. The local trade that reached the city consisted primarily of alimentary products—grain, fish, and cattle—from Asia Minor and Thrace. Regional trade brought in the products of an extended hinterland, including Bulgaria and the entire western Black Sea coast; Bulgarian and Russian merchants brought wax, honey, furs, and linen to Constantinople and exported luxury items. Interregional trade included the entire empire as well as international trade: from the murex of the Peloponnese to the linen cloth of the Pontos to the pork of Paphlagonia to the spices and silk cloth of the eastern trade, which came to Constantinople from Syria through Seleukia or, in the case of spices, through Trebizond.¹³⁴ The longer Mediterranean sea route is also mentioned in the ninth and tenth centuries by Arab sources: the route linking Peluse (al-Farama, in Egypt) to Constantinople and Tripoli to Constantinople, and a coastal route linking the shores of Syria and Asia Minor with Constantinople.¹³⁵

Regional trade networks begin to emerge with some clarity. The case of Thessalonike is by far the best documented, after Constantinople. Its immediate hinterland provided it with grain, wine, fish, and meat.¹³⁶ But it was also a focus of the regional trade of Macedonia. This must be the meaning of Kaminiates' statement that since the time of the Christianization of the Bulgarians "there was no war anywhere, peace ruled in the surrounding areas, there was abundance of goods from agriculture and wealth

¹³¹ See Muthesius, "Essential Processes."

¹³² C. Pellat, "Ġāhiziana, I: Le kitāb al-Tabaṣṣur bi-l-tiġāra, attribué à Ġāhiz," *Arabica* 1 (1954): 159.

¹³³ Patlagean, *Pauvreté économique*, 606–7.

¹³⁴ Koder, *Eparchenbuch*, 9.1, 10.2, 5. On spices, see Haldon, *Three Treatises*, 106–8.

¹³⁵ T. Lewicki, "Les voies maritimes de la Méditerranée dans le Haut Moyen Âge d'après les sources arabes," in *La navigazione mediterranea nell' alto medioevo* (as above, note 3), 1:450–53.

¹³⁶ Kaminiates, 490ff.

from trade.”¹³⁷ But there are some indications of interregional networks as well, where Thessalonike is the center of trade coming from the south, that is, from Greece, and, for a while, from Bulgaria. The Serbian trade cannot have been important in this period, but nevertheless the *De administrando imperio* shows that the route was open to Belgrade, and that there were at least gift exchanges in the early tenth century.¹³⁸ However, it was really at the time of Basil II, and connected not only with his conquests but also with the Christianization of Hungary in the year 1000, that the land routes into central Europe through Belgrade opened up and that Thessalonike developed into an important outlet for that trade.¹³⁹

As for trade with Bulgaria, there was an effort, in the late ninth century (893), to divert some of it from Constantinople into Thessalonike. The effort was spearheaded by two merchants from Greece proper, “men who loved profit,” acting with the agreement, and therefore the high patronage, of Stylianos Zaoutzes. The merchants were also given the right to collect the customs duties levied on the Bulgarian traders, and it was the increase on these duties that led to the rebellion of Tsar Symeon.¹⁴⁰ But the Bulgarian trade with Thessalonike, coming down the Nestos-Strymon-Axios Rivers, seems to have increased ever since the peace with the Bulgarians in 815; indications from the seals of *kommerkiarioi*, of the second half of the ninth century, attest to this importance. The new customs officials of Thessalonike had jurisdiction over Thessaly, Kephallonia, the theme of Thessalonike, and the west of Greece, a sign of the role of the city as a factor of economic integration of these regions.¹⁴¹

Thessalonike seems to have profited greatly from the opening of the hinterland in the course of the ninth century, but also from sea trade, for Kaminiates insists on the importance of the port of Thessalonike and mentions grain as well as merchandise coming in by sea, from Thessaly and Greece, perhaps, and possibly also from the Arab lands. In what may be a rhetorical flourish, he talks of the rich agricultural hinterland, which feeds the city well, but also says that the land and the sea complement each other, for what the land cannot provide, the sea does. He talks of travel by land, along the Via Egnatia, through which merchants pass. He speaks of a permanent market, full of both native and foreign merchants; from trade the inhabitants acquired gold, silver, and silk cloth as abundant as wool was elsewhere. He also speaks of the city’s own manufacture, glass objects for example. When the Arabs captured it in 904, they did not even bother with woolen cloth or vessels of copper and iron, so rich was the rest of the booty.¹⁴² This state of commercial prosperity was interrupted by the Bulgarian wars of the tenth century, that is, for about one hundred years, until the Balkan conquests of Basil II, which opened up the entire peninsula to trading activity.

Other trade centers are also evident in the sources. In the West, Venice was already,

¹³⁷ Kaminiates, 499–500, 496.

¹³⁸ *DAI*, chap. 42.1.

¹³⁹ Ferluga, “Mercati e mercanti,” 485–86.

¹⁴⁰ *Theophanes Continuatus*, 357; Skylitzes, 175–76.

¹⁴¹ N. Oikonomides, “Le kommerkion d’Abydos, Thessalonique et le commerce bulgare au IX^e siècle,” in *Hommes et richesses* (as above, note 1), 2:241–48.

¹⁴² Kaminiates, 491–94, 500, 561, 562, 567–69, 578–80.

in the tenth century, developing as a center of trade that, albeit still modest, involved the Dalmatian coast. Its merchants also engaged in international commerce with Egypt and Constantinople, and a Venetian was in Sparta in the tenth century. By 992 the Venetians were important enough as a naval power and as a trading city to warrant the first trade privilege that reduced very considerably the customs duties they paid upon entering and leaving the Straits.¹⁴³ I consider that privilege to be an important stage in the changes in the Byzantine system of exchange, both because it begins to undermine the special position of Constantinople in the exchange system (as the treaties with the Russians had already done) and because it constitutes a first step in the privileged position of Italian merchants that would play an important role in the Byzantine economy of exchange.

About other centers of regional trade we are less well informed. Demetrias seems to have been an important such center already in the late ninth century, when a sea captain from Rome disembarked his passengers in Modon so that he could sail on to Demetrias, "for trade."¹⁴⁴ On the western coast of the Black Sea, Develtos was a regional center, having replaced Mesembria as an outlet of the Bulgarian trade and place of entry for Byzantine merchandise. According to Svetoslav (969), Presthlaivitza was a commercial center where one could find all sorts of wealth: gold, silks, fruit, and wine from Greece, silver and horses from Hungary and Bohemia, and furs, wax, honey, and slaves from Rus.¹⁴⁵ One may assume that it retained this position after it was captured by the Byzantines. Kherson seems to have been something of a center of exchange for its own hinterland and the Pontic area. Merchant ships from Paphlagonia, Aminos, the theme of Boukellarion, brought to Kherson wine and grain, and the city had its own merchants as well. Its inhabitants traded with the Pechenegs by barter, buying hides and wax in exchange for silk cloth, scarlet leather, and pepper; the exchange value was arrived at through bargaining.¹⁴⁶ Amastris, in Paphlagonia, was also a center of trade for the Pechenegs ("Scythians" of the northern regions of the Black Sea), as well as for people to the south of the city, all of whom flocked here "as to a common emporion."¹⁴⁷

Interregional trade was primarily connected with the luxury items of the eastern trade. Trebizond was an outlet probably for the products of the Pontos and surely for products of Central Asia and Syria (spices, textiles) coming through the overland routes on the way to Constantinople;¹⁴⁸ its annual revenues from the *kommerkion* on

¹⁴³ In 992; edited by A. Pertusi, "Venezia e Bisanzio nel secolo XI," in *Venezia del Mille* (Florence, 1965), 117–60.

¹⁴⁴ *AASS*, Nov. 4:666: *vita* of St. Blasios of Amorion.

¹⁴⁵ N. Oikonomides, "Presthlaivitza, the Little Preslav," *SüdostF* 42 (1983): 1–9; cf. I. Jordanov, "Preslav," *EHb* 669.

¹⁴⁶ *DAI*, chap. 6, and p. 53.512–35.

¹⁴⁷ Niketas the Paphlagonian in PG 105:421.

¹⁴⁸ Cf. Vasiliev and Canard, *Byzance et les Arabes*, 2.2:424: Muqaddasi (died late 10th century) says that there are Muslims in the towns of Bithynia, the "mine des cuivres," and Trebizond. Cf. B. Martin-Hisard, "Trébizonde et le culte de St. Eugène (6e–11e s.)," *REArm*, n.s., 14 (1980): 307–43, esp. 337–38. In the 10th century the Maleinoi had a hospice on their estates for Muslims, presumably traders.

such merchandise is reported as under 10 kentenaria (72,000 nomismata) per year.¹⁴⁹ Theodosiupolis (Erzerum), captured by the Byzantines several times in the course of the tenth century, is attested as a center of the caravan trade, and Adranoutzin, in Georgia, was, according to Constantine VII, a major center for the commerce of Trebizond, Iberia, Abasgia, Armenia, and Syria, “and it has an enormous customs revenue from this commerce.”¹⁵⁰ Attaleia had a rich agricultural hinterland and was also a port of entry for trade with the Muslims through Cyprus and Syria. Indeed, in the late tenth century this was a particularly important step in the Muslim-Byzantine trade, since Attaleia was also a stop on the route north from Alexandria along the coast of Palestine and Syria. Its revenues from port duties ranged from 21,600 to 30,000 nomismata. Those of the theme of Mesopotamia, on the other hand, were only 20 pounds of gold, that is, 1,440 nomismata.¹⁵¹

Agents of Exchange: The Merchant

Who were the merchants, and how far did they travel? Constantinople, of course, was a great entrepôt to which merchants came with their merchandise. But what happened in other areas? The evidence is that Byzantine merchants traveled not only to the ports of entry where they might exchange their merchandise with that of foreign merchants, but also into foreign territory; foreign trade did not take place only in frontier posts. Thus we find merchants from Trebizond, “numerous and wealthy,” going to Syria.¹⁵² Byzantine ships traveled to the mouth of the Lamos River, west of Tarsus.¹⁵³ Merchants in Cairo seem to be numerous: the adjective “Rumi” in the Geniza records designates merchants for the Byzantine Empire, as well as Christians generally. During the reign of Constantine VIII, an Arabic source mentions the arrival in Cairo of “merchants who came from Constantinople by sea and ambassadors who were sent to the sultan.”¹⁵⁴ The conjunction of ambassadors and merchants is interesting, and appears in other periods as well. It could suggest either that ambassadors took advantage of merchant ships going to Cairo, or the reverse. In this period, it was probably the merchant who took the opportunity of traveling on a state vessel.¹⁵⁵ In the Black Sea area, there was enough Byzantine navigation that the treaty of 911 with the Rus discussed the matter

¹⁴⁹ Ibn Hawqal, *Liber Imaginis Terrae*, ed. J. H. Kramers and trans. M. Canard, in Vasiliev and Canard, *Byzance et les Arabes*, 2.2:414–17.

¹⁵⁰ *DAI*, 45.86–90, 46.42–48.

¹⁵¹ Hendy, *Studies*, 174. Ibn Hawqal, 414–17; cf. Muqaddasi, in Canard and Vasiliev, *Byzance et les Arabes*, 424; Treadgold, *State Finances*, 59; cf. Harvey, *Economic Expansion*, 213; Lewicki, “Voies maritimes,” 468. Cf. Oikonomides, “Role of the Byzantine State,” 1008.

¹⁵² On Trebizond, see O. Lampsides, ed., “Ἅγιος Εὐγένιος, ὁ πολιούχος τῆς Τραπεζοῦντος (Athens, 1984), 95–96 and elsewhere; cf. Papadopoulos-Kerameus, *Fontes*, 58: there were, in Trebizond, προύχοντες, στρατιῶται, ἔμποροι τε πλείστοι καὶ ὀλβιοὶ . . . , πλήθος λαοῦ.

¹⁵³ Lewicki, “Voies maritimes,” 451, after Ibn Hawqal, *Liber Imaginis Terrae*, ca. 988.

¹⁵⁴ Al-Mas’udi, *Le livre de l’avertissement et de la revision*, trans. B. Carra de Vaux (Paris, 1896), 236.

¹⁵⁵ Byzantine envoys travel on warships, admittedly at a politically difficult time: Tibi, “Byzantine-Fatimid Relations,” 99.

of salvage in case a merchant ship was shipwrecked on the Black Sea.¹⁵⁶ Some of these merchants were Armenians, some were Jewish, some were neither.¹⁵⁷ In terms of economic developments, the ethnic origins are probably the least important question. The merchants of Byzantine Italy were important, not only those of Venice, but also those of Bari.¹⁵⁸

So the Byzantine merchant was not always sedentary and did not operate only within the empire. How important was the professional merchant? Or, to put the question differently, was the Byzantine economy of exchange primarily in the hands of middlemen, or, on the contrary, was it in the hands of the state and its agents, or of landlords and their agents? As I have indicated above, some tied trade undoubtedly existed, but it was not paramount. Professional merchants carried out a considerable part of the trade. Sometimes aristocrats might invest in trading activities, to be carried out by professionals. The story of the great ship of Empress Theodora, burned on the orders of her husband, Theophilos, because she “had made a *naukleros*” out of him, well known and much quoted, does not refer to tied trade. It has not been noticed that it is, in fact, quite an extraordinary story, since it condemns not only the trading activity of the upper class, but even investment in such activity, clearly something that goes beyond the law and is perhaps to be ascribed to a peculiarity of Theophilos.¹⁵⁹ In any case, Theodora was not transporting grain from her estates, but investing in trade.

The merchants in the *Book of the Eparch*, though their activities were controlled, were professional merchants. The evidence for the existence of independent, professional provincial merchants is very strong. They were middlemen who formed associations, they traveled together to provincial markets, they tried to maximize the profit from their transactions, they dealt in cash, they lent and borrowed money, they formed *koinoniai* (*societates* in western Europe). The seal of Leo, a *πραγματευτής* of the late ninth-early tenth century, certainly belonged to a professional merchant.¹⁶⁰ The existence and importance of such merchants are recognized in sources and by people who were not trying to prove a point: Emperor Basil I (the same man who established the fair at

¹⁵⁶ Sorlin, “Les traités,” 334.

¹⁵⁷ On this question, see Patlagean, “Byzance et les marchés,” 608ff.

¹⁵⁸ A. Guillou, “Production and Profits in the Byzantine Province of Italy (Tenth to Eleventh Centuries): An Expanding Society,” *DOP* 28 (1974): 100.

¹⁵⁹ The story is related in *Theophanes Continuatus*, 88, *Regum libri quattuor*, ed. A. Lesmüller-Werner and H. Thurn (Berlin–New York, 1978), 75 (hereafter *Genesios*), and Zonaras (Bonn ed.), 3:357–58. The learned jurist adds that Theophilos forbade this so that the merchants might not be deprived of their profits, as they would be if aristocrats engaged in trade. This is a throwback to the law (*Bas.* 56.1.19 = *CI* 4.6.3), which Zonaras knew very well, and may also reflect the thinking of the 12th century; it does not necessarily reflect that of the 9th century. The wording of Zonaras’ text is interesting: τοῖς ἰδιώταις τὸ ἐμπορεύεσθαι προσκεκλήρωται. The legislation, on the other hand, forbids aristocrats to engage in ἐμπορία in the cities, ἵνα μεταξὺ τοῦ ἰδιώτου καὶ τοῦ πραγματευτοῦ εὐχερὲς εἴη τὸ πιπράσκειν καὶ ἀγοράζειν συνάλλαγμα. The difference would be that the law seeks to facilitate transactions between individuals and merchants, whereas Zonaras is interested in safeguarding the well-being of the merchants—a sign of the (12th century) times?

¹⁶⁰ G. Zacos, *Byzantine Lead Seals*, ed. J. Nesbitt (Bern, 1984), 2: no. 208; cf. G. Schlumberger, *Sigillographie byzantine* (Paris, 1884), 567 no. 2.

Trebizond) built in Constantinople a church for the use of those who lived near the marketplace, while at the end of our period Symeon the New Theologian wrote in approving terms of the activities of merchants, lending the weight of his approval to those practices that showed a work ethic and that might maximize profits.¹⁶¹ The work ethic, in any case, seems to be the order of the day in the late tenth century, as one can easily see from the *vitae* of St. Athanasios, founder of the Great Lavra, who made of the monastery a large productive enterprise, even though he still used ancient pejorative terms to refer to trade and profit as injurious activities.¹⁶²

Markets and Fairs

Where did exchanges take place and in what conditions? First, it should be said that exchanges in cities were necessarily more active than in the countryside and more highly monetized. But what was the locus of exchange? It is, I think, the case that a number of cities had permanent markets in this period: certainly Thessalonike, where there were two permanent markets, one serving the trade with the Slavs,¹⁶³ Sparta in the late tenth century,¹⁶⁴ and all the other cities that we have seen as centers of regional or interregional trade. In such cities, the town-country exchange could take place virtually constantly. There must also have been short-cycle periodic markets, or high-frequency markets, that is, specific market days when the rural population would bring in their produce to be sold in the city. This is a mechanism for horizontal exchange between producers and also for vertical exchange, the exchange of the merchandise of the countryside for that of the cities.¹⁶⁵ I do not know of any evidence for this in the period under discussion, but it seems plausible.

Fairs, that is, low-frequency periodic markets,¹⁶⁶ not only existed in the period under discussion, but their number and importance seems to have increased. A fair in Trebizond may have been established during the reign of Basil I.¹⁶⁷ We do not know how frequent it was nor its precise function. However, given the multiple role of Trebizond, it is probable that this was both a regional fair and an interregional one that served the larger area of international trade. This would serve for the exchange of the products of the region and as an entrepôt for the trade in luxury items, the spices and textiles mentioned in the *Book of the Eparch*; grain and textiles were also exchanged here. An annual fair is attested in the theme of Paphlagonia at about the same time. It seems to have involved the peasants of the area, who went there to sell some of their products in cash and to exchange others, but it also involved professional merchants who came

¹⁶¹ *Theophanes Continuatus*, 339, and Laiou, "Händler und Kaufleute." Similar attitude in Symeon Metaphrastes, PG 116:460.

¹⁶² Noret, *Vitae duae*, vita A, 182.23; B, 49.31.

¹⁶³ *Actes de Docheiariou*, ed. N. Oikonomides, Archives de l'Athos (Paris, 1984), no. 4.27, 84 (1117).

¹⁶⁴ Sullivan, *Life of St. Nikon*, 116.

¹⁶⁵ De Ligt, *Fairs and Markets*, 6ff, 78–80.

¹⁶⁶ For the definition (more than once a month), see *ibid.*, 15ff.

¹⁶⁷ Sp. Vryonis, Jr., *The Decline of Medieval Hellenism in Asia Minor and the Process of Islamization from the Eleventh through the Fifteenth Centuries* (Berkeley, 1971), 16, 39–40, 160, 477; Papadopoulos-Kerameus, *Fontes*, 54, but the reference may be simply to a feast in honor of St. Eugenios (on 4 June).

from far away, with considerable sums of money: 1,500 gold coins are mentioned as the proceeds (capital and profits) from the sale of the merchandise of one such merchant.¹⁶⁸ In Augustopolis, in the theme of Anatolikon, there was an annual spice (“perfumes”) fair.¹⁶⁹

Local fairs also existed in this period, and their activities appear to have been significant enough to become an object of dispute between the powerful and the weak, who in this case must have been primarily rural communities, but possibly also urban communities. In the late tenth century, such fairs seem to have proliferated, and disputes broke out about where they should be held. Basil II dealt with the question in his great novel of 996 against the “powerful.” Reading through the lines of the novel, one finds that there were merchant associations that took the initiative for establishing fairs in particular localities or moving them around. Their interest in this was paramount: if they unanimously and freely agreed on the location or change of location of a fair, their choice was honored. This argues for a powerful position of the provincial merchants in choosing the area where their activities would take place, and incidentally it argues also that the primary reason for the existence of these fairs was economic and not political—that is, they did not exist primarily to serve the interest of landlords or of the state in controlling the economic activities of the peasantry. One of the processes taking place was the effort of the “powerful” to transfer some fairs to their own estates—something the emperor tried to forbid. There was, therefore, an effort on the part of the landlords to transform these fairs into domanial markets.¹⁷⁰ This would have had immediate economic effects, since it would have transferred the revenues from fairs into the hands of the landlords, and it would also have raised the price of commodities in the cities, if fairs were transferred from the city to the countryside.¹⁷¹ The dispute continued certainly through the first half of the eleventh century, with the balance tilting in the favor of the “powerful.” The presence of professional merchants in these fairs must be stressed. What kind of fair we are dealing with—local or regional—is not clear. What is clear is that these periodic markets had, in the tenth century, great importance. As for their organization, that seems to have been up to the merchants in the first instance, and the “lords of the fair” (κύριοι τῆς πανηγύρεως) in the second. The state intervened only to arbitrate disputes regarding location, and does not appear to have levied any duties on the fair itself.¹⁷²

In Constantinople, matters were more complex. There were, of course, permanent markets, where the inhabitants bought provisions: the bakery shops and the grocery stores, situated all over the city, may be mentioned.¹⁷³ Retail trade certainly took place

¹⁶⁸ For this, and much of the following, see Laiou, “Händler und Kaufleute,” 53–70, 189–94.

¹⁶⁹ Vasiliev and Canard, *Byzance et les Arabes*, 2.2:400.

¹⁷⁰ De Ligt, *Fairs and Markets*, 155ff.

¹⁷¹ Cf. *ibid.*, 180ff.

¹⁷² On further aspects of this novel, and slightly different interpretations, see E. Papagianni, “Byzantine Legislation on Economic Activity Relative to Social Class,” *EHB* 1065ff.

¹⁷³ Koder, *Eparchenbuch*, chap. 13. Attested also, for the 10th century, by Muqqadasi, who wrote that Constantinople had very beautiful markets with low prices and many products: Vasiliev and Canard, *Byzance et les Arabes*, 2.2:424.

in such permanent markets. Bulk sales took place in specified markets and on specific market days, undoubtedly so that the government regulations could more easily be enforced. That the fishmarket and the cattle market were held at particular places is, of course, to be expected.¹⁷⁴ But imported cloth was also bought and sold on particular days and in specified places. The *prandiopratai* had to buy, at the same time (which might extend over a number of days), vestments and clothes brought from Syria and Baghdad, and the sale had to take place in the *mitaton*, that is, the place of residence reserved to foreign merchants. The raw silk merchants also bought their raw silk at a specific time. Merchants could reserve merchandise beforehand, during the *panegyris* (which here must be taken as the equivalent of *foros*, i.e., special market day).¹⁷⁵ Considering that much of this merchandise arrived by sea, that is, probably not during the winter, and that the stay of foreign merchants was limited to about three months, it is plausible to suggest that these days of purchasing the commodities in bulk were something like an annual fair, with, however, a very high degree of oligopolistic organization, since the state controlled rather strictly which guilds were allowed to engage in which kind of purchase. So, one function of an international fair was performed, that is, the purchase of luxury items coming from a large distance, but not the function of merchants from all over engaging in the sale and purchase of each other's wares.

As for selling the merchandise, merchants were to engage in sales openly and at specific places in the market, so that they might be observed to follow the rules. The merchants who sold linen cloth were to sell it on the days of the market, by carrying it around on their shoulders, not from their shops. The jewelers had to be at their shops on the appointed market days, with stacks of coins, so as to be able to engage in trade.¹⁷⁶

Thus Constantinople had both a permanent marketplace and designated days on which bulk purchase of commodities from abroad could take place. This was the regulated part of the market. The "market days" mentioned in the case of the regulation of the sale of specific commodities may refer either to specific days of the week during which Syrian cloth or jewels were sold, or to one day when a great bazaar was held. The market, in any case, must have been very active. Even the palace procured from there silk cloth and garments, both Egyptian and native, as well as humbler items of clothing, and shoes, of varying prices and quality.¹⁷⁷

Money and Credit Mechanisms

The question then arises how trade was carried out, that is, whether barter or cash transactions were dominant, and whether credit mechanisms existed. That there was barter is quite clear: in the story of the peasant Metrios in the late ninth century, the

¹⁷⁴ Koder, *Eparchenbuch*, 17.3, 21.3.

¹⁷⁵ *Ibid.*, 5.3, 6.8, 9.2, on linen merchants.

¹⁷⁶ *Ibid.*, 6.1, 9.7, 2. 3. Cf. Dagron, "Urban Economy," 435–38ff.

¹⁷⁷ Haldon, *Three Treatises*, 112–14.

peasant goes to the fair to sell some of his merchandise and to exchange a part of it; the professional merchant, be it noted, deals only in cash. In the late tenth century, the *typikon* of Tzimiskes for Mount Athos still advises monks not to trade, but to engage in barter exchange, both with monks and with laymen.¹⁷⁸ I think it likely that in rural markets and fairs a certain amount of barter took place, especially in horizontal exchange between peasants. There was barter also in foreign trade, not only in Kherson, as already mentioned, but also in Constantinople: it originated with merchants who came from a part of the empire that did not yet have a monetized economy, namely, Bulgaria and perhaps also from Russia. Merchants from these territories might want to exchange their linen or honey for other commodities—textiles and silk cloth are mentioned. The linen merchants and the grocers acted as facilitators here, finding the merchants who had the cloth and bringing them to the Bulgarian merchants. The cloth merchants would keep the part of the Bulgarian merchandise that they needed (for their private use?) and give the rest to the linen merchants (and, of course, the grocers, respectively). The linen merchants would pay to the cloth merchants one *kera* per *nomisma* (and, presumably, the price of the merchandise in cash); this was the service charge of the cloth merchants, and it was monetized. There were, therefore, two transactions: the cloth merchants exchanged their textiles against honey and linen (barter), presumably at the equivalence prevalent on the Constantinopolitan market; they then resold the honey and linen to Byzantine linen merchants and grocers, for cash.¹⁷⁹ Thus barter was present in transactions in the countryside and in cases where the other party came from nonmonetized areas, but it was not dominant in exchange transactions.

Even its extent in the countryside has to be elucidated. If the payment of taxes was a primary reason for the monetization of rural exchange, clearly the transactions for the payment of taxes were monetized. In the countryside, monetization was driven by both the rising urban population and the impact of the fiscal system. The economic effect, however, tends to be seasonal. That is, the peasant does need and does get cash at specific times, when he has to pay his taxes; but the monetization thus induced has a short cycle, which means that the peasant is cash-rich only during a short period.¹⁸⁰ Therefore, cash transactions in the countryside were complemented by other transactions, namely, barter. For the rest, the monetization of the economy is reflected in coin finds, which, after the 830s, begin to include increasingly large numbers of copper coins, a process that would reach its peak in the second half of the twelfth century. It is most visible in digs in Greece (Athens, Corinth) and in Bulgaria, and less so in Asia Minor, although there too the evidence increases in the tenth century.¹⁸¹ The data from

¹⁷⁸ P. Meyer, *Die Haupturkunden für die Geschichte der Athosklöster* (Leipzig, 1894), 146. On money and monetization in this period, see Morrisson, "Byzantine Money," 959ff.

¹⁷⁹ Koder, *Eparchenbuch*, 108.

¹⁸⁰ For western Europe, see P. Spufford, *Money and Its Use in Medieval Europe* (Cambridge, 1988), 383–6.

¹⁸¹ Morrisson, "Byzantine Money," 958–61ff; Harvey, *Economic Expansion*, 86–90. Cf. V. Penna, "Numismatic Circulation in Corinth from 976 to 1204," *EBH* 655.

saints' lives, collected by N. Oikonomides, show, for this period, transactions in cash in Bithynia, Corinth, Sparta, Reggio, Mount Athos, and Bizye.¹⁸²

While it may be that the state responded to its own (political or fiscal) needs in issuing coin,¹⁸³ it is nevertheless clear that coin circulated, and did so through exchange, not only through political means.¹⁸⁴ Part of the discussion, by Zonaras, of the putting into circulation of Nikephoros II's lightweight solidus (the *tetarteron*) makes precisely this point. According to Zonaras, when Nikephoros II issued this coin, of 22 *keratia*, thus devaluing the gold coin, he also issued a law ordering that it be preferred to the older, and heavier, coins. Why, asks the chronicler, did he pass that law? "So that the merchants would ask for his *nomisma* only, and so that in this way he would draw a profit from all the exchanges (*allagia*) of the *nomisma* that he affected. While the citizens suffered from these vexations, the officials of the marketplace made no provision regarding (the price of) commodities, but each merchant did as he pleased. And the buyers of necessities (the consumers) became poorer day by day."¹⁸⁵ In other words, the emperor devalued the coin, and in order to profit from this devaluation he depended on two mechanisms: one was the mechanism of taxation (he ordered taxes to be paid in the old coin), and the other was the mechanism of trade. It was through the merchants that the circulation of the *tetarteron* would be ensured. Without further regulation regarding prices, the result was duly inflationary, as the merchants passed the cost on to the consumers by raising prices. Nikephoros II may well have issued the lightweight solidus for fiscal and military purposes, as M. Hendy and others have argued. However, the market responded in the way modern economic analysis would expect it to respond. This reinforces what has been argued consistently in this section: state control of aspects of the economy was indeed present but was exercised on specific matters; there was also a market that behaved according to the laws of supply and demand. State control was greater than it would be in subsequent periods, for this was a well-functioning command economy, but the free-market aspect must not be overlooked.

As regards credit, the ninth century saw the effort of Basil I to prohibit lending at interest, on the ideological grounds that it was prohibited by divine law. His son and successor, Leo VI, was forced to rescind the legislation, since, he said, human nature was so weak that people refused to lend money without charging interest, and thus those who needed to borrow suffered. The emperor legislated a flat interest rate of 4% per annum, but this too was not followed, and the *Basilics* restate the Justinianic interest rates.¹⁸⁶ Why Basil I thought he should take this measure is not clear and may not be interesting. It may be that the emperor was trying to atone for some sin by staying

¹⁸² Oikonomides, "Σέ ποιό βαθμό," 365–68.

¹⁸³ Among other works by Hendy, see "East and West," 637–79.

¹⁸⁴ For circulation outside the frontiers of the empire, see Morrisson, "La diffusion," 83–84: circulation of coins, partly through commerce, along the "Varangian" route, into Russia and Sweden.

¹⁸⁵ Zonaras, 3:507. Cf. Hendy, *Studies*, 507, from which comes part of the translation; idem, "Light Weight Solidi, Tetartera, and the Book of the Prefect," *BZ* 65 (1972): 66–67, and idem, "East and West," 662–63. Cf. Morrisson, "Byzantine Money," 931–32, and Oikonomides, "Role of the Byzantine State," 1019–20.

¹⁸⁶ *Procheiros Nomos* 16.3; Noailles and Dain, *Novelles*, no. 83. Cf. Gofas, "Interest," 1100–1101.

close to the letter of divine law. The measure might also be due to more interesting reasons, possibly an increase in borrowing, which may have made the emperor worry. In any case, some decades later, Romanos I, atoning for his own sins, paid off all the debts owed in Constantinople “by rich and poor,” to the tune of 136,800 gold coins, a considerable sum, and burned the contracts (γραμματεῖα or ὁμολογίαι).¹⁸⁷ We do not know how many of these debts were by merchants, but it stands to reason that such sums were not consumption loans alone. So lending at interest continued, presumably at the sixth-century rates. By the early eleventh century, higher rates were unofficially tolerated in Constantinople; the process may have started earlier.

What can one say about the economy of exchange in the seventh to tenth centuries? First, there are considerable differences between the two periods. After the great shock of the losses of the seventh century, what remained of Byzantium was poor and introverted. Cash circulated in the cities, but probably much less in the countryside, until the base tax was monetized. Trade was not extensive and consisted of two layers: one was, in fact, administered trade, carried out by imperial officials who undoubtedly made a profit and a living out of trade as well, but who had the virtual monopoly of the silk trade and the provisioning of large cities. The other layer consisted of small-scale traders and sailors, who carried out their trade in small boats, along the Aegean islands and coastlands, possibly as far away as Italy, always under threat of Arab attack until the recapture of Crete by the Byzantines. The two may have met at some point, maybe at points (like Rhodes and Chios) where grain and other merchandise were collected before reaching Thessalonike or Constantinople.

The grim situation that prevailed in the seventh to eighth centuries did not last very long. The changes can be seen to occur in stages starting with the reign of Constantine V, if that is when the land tax began to be commuted. By the late tenth century, all sorts of things have been reversed, and the economy of exchange presents a different aspect. Constantinople has certainly some of the traits of K. Polanyi’s “port of trade.” The safety of natives and outsiders is guaranteed by the state, even if the location cannot be said to be exactly neutral. The state also provides amenities and mediation mechanisms. The state does not, however, set by administrative action all of the terms of trade: the location and timing of the trade are set and also to some extent the quality of the merchandise, but certainly not its price.¹⁸⁸ More important is the fact that, in Constantinople, the state sets a ceiling for the rate of profit of a number of commercial activities: the sale of groceries, fish, bread, the profit on the resale of Bulgarian commodities, the profit realized by the rich silk merchant who resells to poorer artisans.¹⁸⁹ It is this regulation of the rate of profit, which hovers between 8% (for poorer traders in foodstuffs) and 4% (for bakers and larger merchants) that is the most important aspect of state control, for it tends to stifle initiative. All it may lead to is an effort to

¹⁸⁷ Skylitzes, 231; *Theophanes Continuatus*, 423.

¹⁸⁸ See A. E. Laiou, “Economic and Noneconomic Exchange,” *EHB* 682–83.

¹⁸⁹ Koder, *Eparchenbuch*, 7.2, 1 ouggia per nomisma.

increase the volume of trade and the speed of turnover; cutting of expenses, or any other way of maximizing profits, would not be allowed.

For Constantinople, then, it is true that political interests play a preponderant role for that merchandise that is politically important: that means primarily purple silk cloth, the valuable products of the East, such as spices, and in a very different way, grain. For foreign trade coming into Constantinople, administered action is important, indeed dominant. N. Oikonomides has argued that there is a significant difference between Constantinople and the provinces, with trade and the activities of merchants highly controlled in the first case, but much freer in the second. Indeed, in the provinces, whereas state control was exercised at ports of entry, there is no evidence that the circulation of merchants and merchandise (with the obvious exception of the *kekolymena*) was controlled, or that profit rates were set. So state regulation and administered trade were much less obvious in the provinces and did not even apply to all commodities in Constantinople. Instead, what we have is a mixture: where grain is concerned, undoubtedly the imperial and other domains produced grain that was outside the market; some of it was traded by agents rather than professional merchants. But there are also professional merchants whose activities, whether singly or in associations, are evident in a number of sources, and who can control to some extent the movement of prices and products. What is truly at issue is the extent of that influence. For grain, at least, the corrective actions of government were important. There are, too, other constraints. In terms of investments and credit, whereas trade mechanisms are there, they are still not very tempting to those with money, that is, the aristocracy, who by law are restricted to low interest rates and who could make the same amount of money (or slightly more), with less risk, on urban real estate. Thus an important source of capital is not yet tapped in this period; and at the same time, the very powerful, very rich state, which commands much of the economy through its mechanism of taxation and redistribution, by that same token limits the scope of mercantile activity.

The Eleventh and Twelfth Centuries

The eleventh and twelfth centuries are possibly the most interesting in terms of the development of the economy of exchange.¹⁹⁰ The political background is one of great

¹⁹⁰ For developments in this period, see P. Lemerle, *Cinq études sur le onzième siècle* (Paris, 1977); C. Morrisson, "Monnaie et finances dans l'Empire byzantin, Xe–XIVe siècle," in *Hommes et richesses* (as above, note 1), 2:291–315; eadem, "La dévaluation de la monnaie byzantine au XIe siècle: Essai d'interprétation," *TM* 6 (1976): 3–48; M. Hendy, "Byzantium, 1081–1204: An Economic Reappraisal," and idem, "Byzantium, 1081–1204: The Economy Revisited, Twenty Years On," in *The Economy, Fiscal Administration and Coinage of Byzantium* (Northampton, 1989), arts. 2 and 3; A. P. Kazhdan, "Iz ekonomicheskoi zhizni Vizantii XI–XII vv.," *VizOch* (Moscow, 1971), 169–212; Laiou, "God and Mammon," 261–300; idem, "Byzantine Traders and Seafarers," in *The Greeks and the Sea*, ed. Sp. Vryonis, Jr. (New Rochelle, N.Y., 1993), 79–96; eadem, "Church"; Harvey, *Economic Expansion*; R.-J. Lilie, *Handel und Politik: Zwischen dem byzantinischen Reich und den italienischen Kommunen Venedig, Pisa und Genua in der Epoche der Komnenen und der Angeloi, 1081–1204* (Amsterdam, 1984); the unsurpassed work of W. Heyd, *Histoire du commerce du Levant au moyen âge*, 2d ed. (Leipzig, 1936), is useful for this period as well.

conquests by Basil II followed by times of peace and security, down to the battle of Mantzikert in 1071 and the conquest of Bari by the Normans in the same year—two events that ushered in a period in which Byzantium would be at war on at least two fronts, and often in the Balkans as well. Although Italy and Sicily were lost, the Komnenoi were eventually able to stabilize the eastern frontier, but with the loss of large tracts of territory. The Caucasus was lost, with all that meant in terms of routes of the eastern trade. So was much of the interior of Asia Minor; but if that was disastrous in political terms, it has been argued that in economic terms the loss was not so serious, since these were not the most fertile or the most wealthy of Byzantine lands, and certainly they were not the most highly urbanized, which is a pertinent observation when one deals with the history of exchange. The southern Balkans, on the other hand, including Greece and the islands of the Aegean, entered a period of unprecedented economic development, following the absorption of the hinterland after Basil II's conquests. In Byzantine Italy, the economy was expanding throughout the tenth and eleventh centuries.¹⁹¹

The Byzantine economy in this period was flourishing. Inhabited by an increased labor force, and responding to greater investment, the countryside, including lands newly brought into cultivation, was more productive than ever before. A large number of cities and towns, some with considerable manufacturing, developed. The state seemed very rich, and emperors could spend large amounts of money on whims, or on churches (Constantine IX), or on campaigns and dowries and presents (Manuel I). Of course, sometimes they fell on evil days and had to melt down their own plate as well as that of the church in order to defend the state (the case of Alexios I). Still, between them the emperors and the aristocracy give the impression of having great resources. The state disposed of its money in different ways than in the tenth century, and certainly never again did it have reserves such as those of Basil II. On the other hand, low cash reserves may be a positive sign if they signify an increase in the velocity of circulation of the coinage. Possibly, some of the opulence came from the monetization of the obligation to serve in the army: a good short-term way of increasing cash revenues, and also a factor in the greater degree of monetization of the economy, however one might evaluate its political-military effects.

The economy of exchange, according to all indications, was part of this economic upswing, as one might well expect given the conditions described above. As we have seen, in the late eleventh century the empire became more of a coastal state, although this process was not as advanced as it would become in the fourteenth century. In a coastal state, with increased agricultural production and higher urbanization, the relative importance of sea-borne trade would necessarily also increase. This, however, is where matters become complicated. For the eleventh century saw in western Europe what has been called the "Commercial Revolution": a considerable and sustained quickening in the relations of exchange, which was most evident and most advanced in the Italian maritime cities, but which would eventually include all of Europe, with

¹⁹¹ Guillou, "Production and Profits."

the coastal areas (Italy, Flanders, the Hanseatic towns) playing a major role throughout the high and late Middle Ages. In the eleventh century, the Italian maritime cities were at the forefront of this development, and among them Amalfi, Pisa, Genoa, and Venice were the most important. Whereas Pisa and Genoa were still, in the eleventh century, primarily interested in areas in their backyard, so to speak, namely, in North Africa, Amalfi and Venice had as a natural area of interest the Byzantine Empire, Egypt, and the eastern trade. By the twelfth century, all of the Italian maritime cities had an acute interest in the trade of the eastern Mediterranean. The Commercial Revolution meant, among other things, an opening up of the western European markets and an increased volume of exchange. This certainly also implicated the eastern Mediterranean, which, for the first time since the sixth century, became part of a world of active exchange that included Italy and, by the late Middle Ages, the entire basin. There were, however, differences from the sixth century. And one has to be careful to distinguish between the effects of the Commercial Revolution on exchange between the Byzantine Empire and the West on the one hand, and, on the other, its effects on trade within the Byzantine Empire and on the activities of the Byzantine merchant. In any case, now for the first time the Byzantine economy of exchange has to be discussed in conjunction with the Italian commercial economy, and the relation between the two becomes important.

Noneconomic Exchange

Gifts between rulers continue to appear in this period, alongside real commerce: the *Book of Treasures*, for example, concurs with Byzantine sources in crediting Constantine IX with “affluent generosity,” or profligacy, as the Byzantines saw it. In 1046, on the occasion of a treaty negotiation, he is said to have sent to the caliph in Baghdad the largest gift of any of his predecessors, from time immemorial: 30 quintars of gold (216,000 nomismata) and 300,000 dinars, in all, more than 2 tons of gold.¹⁹² Of the other gifts, bribes, or subsidies paid in this period, one might mention the payment of 144,000 nomismata to Henry IV, who also received silks and jewelry, and the payment of 135,000 nomismata promised by Manuel I to the sultan of Iconium in 1176. Vast sums of money were promised to Bohemond in 1097, and equally large sums to Kilidj Arslan II during his visit to Constantinople in 1161.¹⁹³ The grandiose policies of Manuel I were expensive, as were the pusillanimous ones of his successors; the Sicilian campaign of 1155 cost a staggering 300 kentenaria (2,160,000 nomismata), and Choniates called this and other wars a gangrene on the treasury.¹⁹⁴ Both Manuel I and the Angeioli were spendthrift,¹⁹⁵ but while this depleted the treasury it did not have an important effect on trade. As for gifts or bribes to foreigners, they may have had a high value, but the number of silks sent as gifts must have been minuscule compared to the silk

¹⁹² Qaddūmī, *Gifts*, account 82.

¹⁹³ For references, see Hendy, *Studies*, 265–71.

¹⁹⁴ *Nicetae Choniatae Historia*, ed. J. L. van Dieten, 2 vols. (Berlin–New York, 1975), 96–97 (hereafter Choniates).

¹⁹⁵ *Ibid.*, 204–6, 539.

that circulated by commercial means. Furthermore, what is of interest in this period is not only the movement of luxury goods but also the movement of staples or products that were less valuable individually but were traded in significant quantities.

Economic Exchange

Domestic Trade The development of domestic trade is intimately connected with a rising urban and rural demand for goods of all kinds, as well as with an increase in the numbers of available coin and with the development of agriculture. This is not to imply that there was a unilinear causal connection between these factors; on the contrary, it is evident that the relationship between them was in both directions or, if one prefers the term, that it was a dialectic relationship. The matter of provisioning is, as always, important. The cities seem to have had no problems with provisioning in this period, and Constantinople in particular was filled with the products of the provinces: the poems of Ptochoprodromos, with their mention of the many varieties of wine and cheese, and the many different cuts of meat, make the point clearly. In the Bulgarian areas annexed by Basil II, coin seems to have been hard to come by: when, in 1040, the Bulgarians were ordered to pay their taxes in cash rather than in wheat, barley, and wine, the result was rebellion.¹⁹⁶ One deduces that there was forced commercialization of agricultural production here; but in the rest of the empire no force was necessary.

In the provincial towns, the evidence of trade, involving agricultural products or by-products, is clear. Most of it would probably be local trade, involving a town and its immediate hinterland; but some was regional. Euchaita, in Asia Minor, had grain, but was also forced to import grain and wine.¹⁹⁷ A number of cities would, like Athens, be surrounded with fields and gardens, from which produce was brought into the city.¹⁹⁸ The purple dye produced in Athens was presumably sold for dyeing silk cloth, but how far it traveled we cannot know; the silk industries of Thebes and Corinth were the likely clients, although there was also, apparently, cloth dyed in the city itself.¹⁹⁹ Soap, too, was produced here, and although we only have evidence of it being used as a gift, it is well known from other sources and areas that soap was an object of trade in the Middle Ages.

Silk More interestingly, there was increased specialization of production, which necessarily means trading activity. The great silk-producing centers were Thebes and Corinth, with specialized workers and a production that was well known in the Byzan-

¹⁹⁶ Skylitzes, 412.

¹⁹⁷ *The Letters of Ioannes Mauropous, Metropolitan of Euchaita*, ed. A. Karpozilos (Thessalonike, 1990), 280 (ep. 64).

¹⁹⁸ *La géographie d'Edrisi*, ed. P.-A. Jaubert, 2 vols. (Paris, 1836–1840; repr. Amsterdam, 1975), 2:294–95.

¹⁹⁹ See M. Kazanaki-Lappa, "Medieval Athens," *EHB* 642–44; Sp. Lambros, *Μιχαὴλ Ἀκομινάτου τοῦ Χωνιάτου τὰ σωζόμενα*, (Athens, 1880), 2:136–7, and 98–100 on trade.

tine Empire and that also attracted Italian merchants, not to mention the raids of Roger II of Sicily in the 1140s. When Roger captured and looted Thebes in 1147, he found it full of gold and silver and gold brocade, which he took with him to Sicily, along with female silk weavers.²⁰⁰ Thebes remained one of the most frequent ports of call of the Venetians in Greece in the twelfth century and one of the most lucrative ones. When the Genoese tried to renegotiate their treaty with Byzantium in 1170, they asked to be allowed to carry out “negociationem pannorum sete apud Stivam sicut Veneti soliti erant.”²⁰¹ The silk cloth went to Venice and then was redistributed in western Europe, including the Norman court, but it also went from Thebes to Constantinople.²⁰² Smaller centers of manufacturing developed: Andros, which produced *sundus*, samite, and other silks that were carried by the Genoese all over the western Mediterranean; Patras and Euboea and Thessalonike as well. These were silks produced in private workshops. The high-quality purple silk²⁰³ of Thebes was, at least in part, destined for the court²⁰⁴ and presumably commissioned by it. But Venetian traders carried it to other parts of the empire and the West, so obviously some of it was marketed by middlemen, and the same may be assumed for the silk cloth produced in other areas of Greece. The affluence of the eleventh and twelfth centuries, and undoubtedly also the explosion in the number of Byzantine “aristocrats,” created a demand for silks that was satisfied by increased supply; but it appears that the demand was for second-quality silk, which in any case would not have been controlled by the state, and which could be produced in large quantities and marketed without impediment. There was, then, a market for silks that was self-regulating to a considerable extent. The silk industry also involved the distribution of other raw materials, within the Byzantine Empire and its neighboring areas: for example, the importation of raw silk from (Byzantine) southern Calabria to Constantinople (ca. 1050), or the export of raw silk from Cyprus to Tripoli in Palestine, in the eleventh century.²⁰⁵

Other Products Other specialized products that were manufactured in marketable quantities included the glass of Corinth and ceramics.²⁰⁶ The production and dissemination of these wares show a much more variegated economy, where exchange involved

²⁰⁰ Choniates, 74; cf. p. 76 on Corinth. On silk in the provinces in this period, see Dagron, “Urban Economy,” 440, 443.

²⁰¹ See, on this, Laiou, “Byzantine Traders,” 87ff.

²⁰² *Documenti del commercio veneziano nei secoli XI–XIII*, ed. R. Morozzo della Rocca and A. Lombardo, 2 vols. (Turin, 1940), 1: no. 308. On the silk industry and trade in this period, see the excellent study by D. Jacoby, “Silk in Western Byzantium before the Fourth Crusade,” *BZ* 84/85 (1991–92): 452–500.

²⁰³ On which see, for example, *The Itinerary of Benjamin of Tudela*, trans. M. Adler and A. Asher, ed. M. Signer (Malibu, Calif., 1993).

²⁰⁴ Skylitzes Continuatus mentions the fact that Romanos IV gave the senate and the army their annual salaries not all in gold, but also in silk cloth (‘*Ἡ Συνέχεια τῆς Χρονογραφίας τοῦ Ἰωάννου Σκυλίτση*, ed. E. T. Tsolakes [Thessalonike, 1968], 142). Although presents of silk cloth to the imperial officials are nothing new, as the *De cerimoniis* attests, it may be that Romanos increased the proportion of silk given as payment; lack of coin, or abundance of silks due to thriving provincial production?

²⁰⁵ Jacoby, “Silk Trade,” 476, 496; Guillou, “La soie du katépanat d’Italie.”

²⁰⁶ See V. François and J.-M. Spieser, “Pottery and Glass in Byzantium,” *EHB* 597–98, 601ff.

all sorts of items; the raw materials and the semi-luxury objects such as white ware, as well as more common glazed pottery, are of particular interest since they attest to a true commercialization that took place over both a local and an interregional network.

Grain As always, however, the most important item of trade, certainly in terms of bulk, and also in political and economic terms, was foodstuffs: olive oil, wine, cheese, meat, and, primarily, grain. Cities could draw grain from a large area. Constantinople, always an exception and now with a large population, seems to have drawn its food not only from the immediate hinterland, not only from the Black Sea area, but from all over the southern part of the peninsula as well: Michael Choniates, in a hostile passage, said, "Are not the grain-bearing fields of Macedonia and Thrace and Thessaly farmed for your benefit? Is it not for you that the grapes of Euboea and Pteleos and Chios and Rhodes are trodden into wine?"²⁰⁷ This was a true interregional trade in food, but what kind of trade was it? Was there a free market in grain, or was it administered or tied trade? The answer is really a combination. Administered trade in grain there was not; although there were, still, regulations and controls over profits in foodstuffs,²⁰⁸ there was no state impost of grain, and the last important state intervention in the grain trade was in the 1070s. The testimony of Albert of Aix, that at the time of the First Crusade only the emperor could trade in wine, olive oil, wheat, barley, and other staples, cannot be taken seriously.²⁰⁹ It probably means simply that Alexios, like his successors, established special markets for the provisioning of the Crusaders, and that he, as emperor, had to guarantee that he would do so.

As for tied trade, it has been said that the great ecclesiastical and lay houses could and did bring into Constantinople important foodstuffs from their own estates. There is, indeed, some evidence for this: for example, the Komnenoi had, in 1081, great storage spaces for wheat and other victuals.²¹⁰ At the same time, it must be remembered that in the eleventh century, and certainly in the twelfth, great monasteries, such as Patmos and Mount Athos, also sold their grain and wine, and resold that of others, to the cities, including Thessalonike and Constantinople.²¹¹ Whereas this kind of trade

²⁰⁷ Lambros, *Μιχαὴλ Ἀκομινάτου*, 2:83; the translation is by P. Magdalino, "The Grain Supply of Constantinople, Ninth–Twelfth Centuries," in Mango and Dagron, *Constantinople and Its Hinterland* (as above, note 34), 36. Other discussions of this affair abound. Among the most recent, see Kaplan, *Les hommes et la terre*, 469–70; Harvey, *Economic Expansion*, 236–68; Laiou, "Byzantium and the Commercial Revolution," in *Europa medievale e mondo bizantino* (as above, note 66), and Oikonomides, "The Economic Region of Constantinople," *ibid.*

²⁰⁸ See G. Dagron, "Poissons, pêcheurs et poissonniers de Constantinople," in Mango and Dagron, *Constantinople and Its Hinterland* (as above, note 34), 72, on the price of fish in the 12th century; cf. Dagron, "Urban Economy," *EHB*.

²⁰⁹ RHC, HOcc 4:311d.

²¹⁰ *Alexias* 2.5.8 (Anne Comnène, *Aléxiade*, ed. B. Leib [Paris, 1937], 1:79).

²¹¹ For Mount Athos, see M. Živojinović, "The Trade of Mt. Athos Monasteries," *ZRVI* 29/30 (1991): 101–16; For Patmos, see MM 2:82ff; an imperial chrysobull of 1197 gives Patmos fiscal exemptions for a boat, to trade in "whatever seems appropriate [to them]," whereas earlier privileges had mentioned specifically that the boats would carry necessities to the monastery: E. Vranousi, *Βυζαντινὰ ἔγγραφα τῆς Μονῆς Πάτμου*, Α'. Αὐτοκρατορικά (Athens, 1980), no. 11, lines 19–20; cf. nos. 7, 8, 9.

may be out of the hands of professional merchants, it is not outside the market. The monks sold for profit, and in privileged conditions, too, since they enjoyed tax exemptions. This is not truly what C. R. Whittaker calls tied trade; it is market exchange, and that is why it was castigated by a series of moralists in the eleventh and twelfth centuries.

Did a free market in grain, served by professional merchants, exist, and was it important? The last great effort for state intervention in the grain market, undertaken by the logothete Nikephoritzes during the reign of Michael VII (1071–78), provides information on this question. The matter concerns the city of Rhaidestos, a major outlet for the wheat of Thrace, whose primary market would have been Constantinople, although the local area was also fed from there. Before Nikephoritzes' reform, we are told, people brought their grain to Rhaidestos in carts and sold it at special places provided (against a fee, undoubtedly) by the church and "others of the city" (i.e., those who owned urban real estate). Some grain was even sold at "the houses" of the city's inhabitants, by which we can only understand the warehouses of medium-size landowners resident in Rhaidestos. The sale of grain took place in conditions of pure competition, as is the case when both the sellers and the buyers are numerous; and Attaleiates, who had a good understanding of these things, also says that as a result prices were low, meaning that the consumers in the cities were able to buy grain at a low price. Direct purchase by the consumer, in the conditions mentioned here, would indeed result in low prices. Who were the buyers? "City dwellers, those who dwelt in the countryside, and those who imported it to Constantinople by sea."²¹² The last group is later called "merchants," but it is clear that they were people of moderate buying power. Thus we have a situation where there is a real grain market, something much more than the periodic market where the peasant sells his surplus grain once a year to pay his taxes. This is an organized market, and there are sales both from producer to consumer and from producer to the middlemen who would take the wheat to Constantinople.

What Nikephoritzes did was to try to forbid direct sales, which seem to have escaped the payment of the *kommerkion*, because they were small-scale and involved large numbers of people. He established a *phoundax*—a central marketplace—outside the town, where all wheat was to be sold, and where he, as the state, could collect the *kommerkion* and also the rental fees for the use of the marketplace. It is to be noted that he did not impose a price—the Byzantine state rarely did. On the contrary, the buyers were profit-driven, bought at the cheapest price they could, and tried to make a profit of 3 nomismata for one nomisma. The people who bought the wheat—and who now were the only ones who had the right to buy it—are called *sitonai* and *sitokapeloι*. *Sitonai* has a venerable ancestry, denoting those who in the past had bought for the city or state government, thus people who were officials and had trade as a sideline—clear admin-

²¹² *Michaelis Attaliotae Historia*, ed. I. Bekker (Bonn, 1853), 201–4 (hereafter Attaleiates): οὔτε ναυτικὸς εἰσάγων αὐτὸν εἰς τὴν βασιλεύουσαν, οὔτε ἀστικὸς ἄγροικος οὔτε ἄλλος οὐδεὶς. The other major source for this affair is Skylitzes Continuatus, 162.

istered trade. But there is no indication that state officials were involved in this affair, other than in supervising the market and collecting the taxes. The phrase regarding *sitonai* and *sitokapeloι* need not have a reference to contemporary reality. It is a stock phrase from Gregory of Nazianzos.²¹³ The real purchasers were, I think, merchants: a small number of rich merchants who bought in bulk. In such oligopsonistic conditions, this becomes a buyer's market. The seller loses, and the price the consumer eventually pays can indeed rise, because of the oligopolistic situation, which is what both Attaleiates and Skylitzes Continuatus say happened. The beneficiaries are the state (which collects the taxes) and the big merchants. Thus this measure is not an effort by the state to establish a monopoly of grain run by the state, but rather a measure that works in favor of a few great merchants and to the detriment of the peasants who brought their merchandise to market, the local landowners who may also have sold their grain and who certainly had profited in the past from market fees, and probably of the consumer.²¹⁴

This measure failed, and a few years later the *phoundax* was destroyed. For us, its interest lies first of all in the proof it provides for a lively grain trade in outlets near the areas of production; and second, the fact that the trade at the place of production was quite decentralized, to the benefit of the local landowners. Some of them even had their own measures for grain; private weights and measures were an important prerogative that western European feudal lords enjoyed, and that western kings were trying to obtain throughout the fourteenth century. It is significant that the prohibition of private weights and measures by Nikephoritzes arouses the ire of Attaleiates the landowner. Third, it is important that grain, at least in the place of production, was traded freely. The government could still intervene, if necessary, to keep the price in Constantinople stable; no such intervention is noted in the twelfth century, but nevertheless the price of grain in Constantinople, as far as we can tell, remained stable over the long run, that is, without taking into account the fluctuations that occurred from time to time. The stability may indicate some state intervention or a stable technology. As for the immediate results of the measures of Nikephoritzes, the accounts of both Attaleiates and Skylitzes Continuatus are greatly exaggerated; Attaleiates was perhaps more concerned with his own losses, as a landowner in Rhaidestos. As has already been pointed out, the rapid devaluation of the nomisma during the reign of Michael VII is sufficient to explain the price rise in Constantinople.²¹⁵ If Nikephoritzes was an intelligent man, which we have every reason to believe, it is possible that he also understood that his measures had the potential of increasing the price of grain in Constantinople,

²¹³ Or. 14.19, in PG 35:960B, and PG 36:544A. Cf., for example, the use of the phrase by Symeon Metaphrastes, PG 116:421.

²¹⁴ There is, as far as I know, no evidence to support Magdalino's hypothesis that the merchants involved were Amalfitans: "Grain Supply," 44. For further discussion of the affair of Rhaidestos, with a somewhat different interpretation, see Dagron, "Urban Economy," 453. Attaleiates was a landowner in Rhaidestos, which may explain his violent opposition to the *phoundax*.

²¹⁵ J.-C. Cheynet, E. Malamut, and C. Morrisson, "Prix et salaires à Byzance (Xe–XVe siècle)," in *Hommes et richesses* (as above, note 1), 2:361–63.

and therefore his support of big merchants may have been a conscious abandonment of the state's effort to keep this price within traditional ranges.

Price Formation Regarding price formation and the role of the self-regulating market in the Byzantine Empire in this period, two more points may be made. One concerns the distribution of the products of large estates, and the other some further indications about market forces in the most regulated market, which was Constantinople. As to the first, the increase in production and perhaps productivity in the agricultural sector resulted in surplus that was capable of being marketed. Was it, in fact, marketed, or was it simply redistributed between the rural and urban components of the property of great landlords, lay and ecclesiastical? Great monasteries did redistribute some of their resources. The monastery of Pantokrator has been cited in this respect: its philanthropic activities in Constantinople must have been financed by its agricultural production. And it is to be expected that great landlords, resident in the cities, would feed themselves and their retainers from the products of their estates. However, self-sufficiency was more an ideal than a reality, and landlords sold part of their product on the market. The case of the landlords of Rhaidestos is clear. Equally, the monasteries of Lavra, other Athonite monasteries, and Patmos are known to have sold part of their production on the market.²¹⁶ The monastery of Pantokrator owned, among its large estates, the *emporion* of Madytos, presumably getting the market dues, also perhaps trading from there.²¹⁷ Eustathios of Thessalonike, in his virulent commentary on the mores of the monks of his time, castigated those who frequented the marketplace, who lent money at illegal interest rates, who grew rich through trade (ἀπὸ πραγματειῶν πλουτίζονται), who raised cattle and horses for the market, who argued about how to buy cheap and sell dear wheat and wine, that is, about how to maximize profits.²¹⁸

Of course, the castigation of monks for indulging in economic matters is of venerable antiquity, but Eustathios' comments, far from being a meaningless commonplace, are supported by what we know of monastic economic activities in this period and by efforts to reform and change them. To give only one example, the *typikon* of Kosmosoteira, a monastery established by Isaac Komnenos, includes an injunction to the *hegoumenos* to make sure to buy the year's supply of olive oil when it is cheapest, and not from retail merchants (πραγματευταί) but from the wholesalers who put into the port of Ainos; wine, too, should be purchased when it is cheapest.²¹⁹ The *typika* of other monasteries make a similar plea to exercise good economic sense in purchases for the monastery.²²⁰ This corroborates the statement that monasteries were very much in-

²¹⁶ See Harvey, *Economic Expansion*, 238ff.

²¹⁷ Ibid., 231–32.

²¹⁸ PG 135:729–910.

²¹⁹ L. Petit, "Typicon du monastère de la Kosmosotira près d'Ænos (1152)," *Bulletin de l'Institut archéologique russe à Constantinople* [= *IRAIK*] 13 (1908): 63, 66.

²²⁰ See, for example, the *typikon* of Kecharitomene, in which Irene Doukaina advises that blankets and clothes for her convent should be bought when the supply in the market is large, and therefore the price is low: PG 127, chaps. 52 and 68.

volved in trade, both as consumers and as sellers. Although information about lay landlords is not nearly as abundant, it is sufficient to show that they both raised cash crops, such as silk cocoons, and commercialized their agricultural production, as did the *archontes* of Sparta who sold olive oil to the Venetians.²²¹ While much of the information comes from the activities of Venetian merchants, for such is the accident of sources, it is nevertheless useful, since it does show that agricultural surplus was, indeed, marketed. So the increased production of the large estates did not mean that self-sufficiency was finally achieved; rather, it meant that a greater part of the agricultural surplus was commercialized.

The second point has to do with price formation on the marketplace. It is significant that when our sources speak of prices, they refer primarily to the interplay of supply and demand. We have already seen that Eustathios of Thessalonike did so in his description of the activities of the monks. It is also the case with an episode related by Michael Psellos in the rewriting of the *vita* of St. Auxentios, an episode sufficiently different from that related in the original *vita* to acquire an air of contemporary authenticity. It is a tale of the marketplace at a time of crisis. The crisis is due to the fact that contrary winds (or other factors, possibly human) impeded the entry of raw materials into the city; this decline in supply resulted in high prices, which reduced demand to a level that was highly injurious to both craftsmen and merchants. The "saint" intervened, apparently to negotiate acceptable prices, and the situation improved.²²² The analysis of the Rhaideustos affair by Attaleiates is also an economic analysis, even though the measures he describes are those of an imperial official who, by imperial fiat, takes action that intervenes in the functioning of market forces and by his administrative measures diverts market forces into different channels.

All of this shows quite a good understanding of how a marketplace works, and also that the marketplace did work for most products. It follows that prices, for those commodities that were commercialized, were formed in the marketplace, with the possible exception of grain prices. What is new in the eleventh and twelfth centuries is that a larger part of the production was commercialized and therefore subject to market mechanisms; and that may be partly, but only partly, due to the activities of Italian merchants. In this period, the eleventh and twelfth centuries, the part of the Byzantine economy, of the gross national product (GNP), if one likes, that came from activities other than agriculture (of which the major ones would be trade and manufacturing) must have been significant, perhaps 25%.²²³ How much of the monetized GNP such activities (or their monetized part) represented is not at all easy to gauge, but I would think that a figure of 40% or just over is not excessive. The changes in the fiscal prac-

²²¹ See above, on silk, 739–40; on other products, P. Magdalino, *The Empire of Manuel I Komnenos, 1143–1180* (Cambridge, 1993), 160–71; Harvey, *Economic Expansion*, 224ff, and chap. 4. On agricultural production, see Lefort, "Rural Economy," 248–50.

²²² *Michaelis Pselli Orationes Hagiographicae*, ed. E. A. Fisher (Leipzig, 1994), 19; cf. A. Kazhdan, "Hagiographical Notes," *Byzantion* 53 (1983): 549–50.

²²³ A. E. Laiou, "The Byzantine Economy: An Overview," *EHB* 1154–55.

tices of the state, which helped money to circulate, are both a reflection and a cause of the monetization of the general economy, even though the *state* economy perhaps became less monetized.²²⁴

Foreign Trade Foreign trade included much the same kinds of merchandise as earlier, but there were also important new trends. Trade with the Fatimids seems to have been brisk, with the Byzantines exporting silk cloth as well as items of more utilitarian nature, such as cheese and wooden furniture, and importing spices, perfumes, and precious wood. The shipwreck at Serçe Limani attests to the briskness of this trade, which, along with other wares, carried glass cullet (3 tons of it) from the coast of Syria/Palestine to some glass-producing factory in Greece, probably Corinth.²²⁵ The most important change, however, is the development of the new western European markets and the role of the Italian merchants, on which more will be said below. Suffice it to say here that Italian trade in the empire took place under privileged conditions, incorporated in a number of treaties and privileges. Originally, these were granted to cities that were subject to Byzantium (Amalfi, Venice) but eventually also to Genoa and Pisa. They reduced or, in the case of Venice, abolished the entry duty on ships entering and leaving Constantinople, and eventually also abolished the transactions tax between Italian merchants and Byzantines.²²⁶ The development of trade with Italy was also attended, in the twelfth century, by piracy, which was now exercised by Italians rather than Arabs, and which often had political as well as economic motives.²²⁷

Trade Networks

The Byzantine economy of exchange in the eleventh and twelfth centuries shows complex networks of regional and interregional trade. Constantinople remained not only a central place for local and regional commerce, but also an important entrepôt for international trade. Benjamin of Tudela could compare it only to Baghdad:

All sorts of merchants come here from the land of Babylon, from the land of Shinar, from Persia, Media, and all the sovereignty of the land of Egypt, from the land of Canaan, and the empire of Russia, from Hungaria, Patzinakia, Khazaria, and the land of Lombardy and Sepharad. Constantinople is a busy city, and merchants come to it from every country by sea or land, and there is none like it in the world except Baghdad, the great city of Islam. . . . From every part of the

²²⁴ Oikonomides, "Role of the Byzantine State," 1026 ff.

²²⁵ F. H. van Doorninck, Jr., "The Medieval Shipwreck at Serçe Limani: An Early 11th-Century Fatimid-Byzantine Commercial Voyage," *Graeco-Arabica* 4 (1991): 45–52; cf. idem, "Byzantine Shipwrecks," 902–4.

²²⁶ The latest edition of the treaties with Venice is by M. Pozza and G. Ravegnani, *I trattati con Bisanzio, 992–1198* (Venice, 1993). For a description of the various privileges, see Lilie, *Handel und Politik*, passim.

²²⁷ H. Ahrweiler, "Course et piraterie dans la Méditerranée orientale aux IV^{ème}–XV^{ème} siècles (Empire byzantin)," *Commission internationale d'histoire maritime—course et piraterie* (Paris, 1975), 1:7–29.

Empire of Greece tribute is brought here every year, and they fill strongholds with garments of silk, purple and gold. . . . It is said that the tribute of the city amounts to 20,000 gold pieces every year (day), derived both from the rents of shops and markets, and from the tribute of merchants who enter by sea or land. The Greek inhabitants are very rich in gold and precious stones, and they go clothed in garments of silk with gold embroidery, and they ride horses, and look like princes. Indeed, the land is very rich in all cloth stuffs, and in bread, meat and wine.²²⁸

Other cities became centers of regional and interregional trade. Thessalonike had, after the conquests of Basil II, a greatly extended hinterland, which now involved the lands of medieval Serbia, up to Belgrade, although, of course, we have to wait for the fourteenth century before Serbia becomes important in terms of trade. Thessalonike received the products of Bulgaria no longer directly, but rather through Constantinople; it still received the products of Greece, as well as, at least once a year, products from Italy and the Muslim lands.²²⁹ It was a center of collection and redistribution of the merchandise of these areas. Its inhabitants included merchants avid for profit, to the point of cheating, according to Eustathios of Thessalonike.²³⁰ The emergence of a number of cities that fulfilled this role, centers where the merchandise of a region or of a number of regions was collected and picked up by merchants, should not be surprising after what has already been said above. The city of Halmyros, in Thessaly, was a relatively new such center, probably replacing Demetrias. Al-Idrisi describes it as a “populous merchant city. The Greeks bring their merchandise there.”²³¹ We know that the commodities (grain for the most part) were picked up by the Venetians, Pisans, and Genoese who inhabited the city.²³² The account of al-Idrisi notes a number of cities with commercial activities important enough to warrant specific mention. They are mostly situated along the coasts, with some exceptions, such as Ohrid, “remarkable for the importance of its commerce,” and Philippi, which is said to have much industry and import and export trade.²³³ Dyrrachion, Sparta, Patras, Chrysopolis (“remarkable for the beauty of its markets and the importance of its commerce”),²³⁴ and Corinth were all regional trade centers. Thebes was a city of great importance, but primarily because of the silk trade; it does not seem to have functioned as a regional or interregional center for other trade.

²²⁸ *Itinerary of Benjamin of Tudela*, 70–71 (“every year”). For the reading “every day,” see the editions by B. Gerrans (*The Travels of Rabbi Benjamin, son of Jonah, of Tudela*, [London, 1783]), 58–59, and A. Asher (*The Itinerary of Rabbi Benjamin of Tudela*, 2 vols. [London, 1840]), 53. The figure seems very high. It has been proposed that it may refer to revenues not of the capital alone, but of the whole empire: Morisson, “Monnaie et finances,” 308.

²²⁹ On fairs, see below, 754–56.

²³⁰ Magdalino, *Manuel I*, 149.

²³¹ *La géographie d'Edrisi*, 2:296.

²³² *Ibid.*, 291, 296; Benjamin of Tudela, ed. Adler, 69; M. Balard, *La Romanie génoise, XIIe–début du XVe siècle*, 2 vols. (Rome–Genoa, 1978), 30.

²³³ *La géographie d'Edrisi*, 2:288, 297. Presumably, the trading took place from its port, Christoupolis.

²³⁴ *Ibid.*, 120, 297.

Al-Idrisi also describes other areas of the Byzantine Empire as being involved in trade, although its extent is not always clear. The cities of Cyprus are said to have important markets, “where one may find all sorts of provisions, manufactured objects, and merchandise.” This sounds like local markets, where, among other things, alimentary products (honey is particularly mentioned) are exchanged. A western source estimates the fiscal revenues of Cyprus in the late twelfth century as more than 50,000 hyperpyra per year.²³⁵ Crete exported its renowned cheeses, and indeed we find mention of them in the documents of the Cairo Geniza.²³⁶ The Peloponnese is credited with fifty cities, “of which about sixteen are important and renowned.” These cities, says Al-Idrisi, have permanent markets. His discussion of a flourishing hinterland suggests local trade, with the exception of Sparta and Corinth, which, as we have seen, were involved in interregional trade.²³⁷ Rendina, in Macedonia, where markets are also mentioned, may be a site for local trade.²³⁸ Similarly, the body of water separating the island of Euboea from the mainland is described as a “carrier of profitable trade,” presumably local trade.²³⁹

The Black Sea was securely in Byzantine hands, the government jealously guarding against any foreign merchants traveling there. The grain of the northern coast of the Black Sea does not seem to have entered the Byzantine or international market yet, but Kherson, still a Byzantine possession, was prosperous. Items of trade included pelts, honey, wax, and possibly slaves.²⁴⁰

In Asia Minor, a number of cities served similar purposes. Most important was the city of Trebizond, which was a focal point for the trade route from Kherson by sea, and also for the land routes from Central Asia, the Caucasus and Syria. It sent to Constantinople grain as well as the spices and other products of the eastern trade. It was a great emporium and, according to contemporary sources, the major outlet for Byzantine silks and brocades imported into the Islamic countries.²⁴¹ Other cities were important in the tenth and eleventh centuries, but were destroyed during the Seljuk invasions. Such was the city of Artze, where, says Attaleiates, came all the merchandise of Persia, India, and the rest of Asia, in large quantities. It was inhabited by merchants, both natives and Armenians and Syrians, “and those of other nations, a great crowd of them.” When it was taken and burned by the Seljuks in 1049, a large amount of money was found there.²⁴²

²³⁵ Ibid., 130. For the revenues, see Hendy, *Studies*, 173, and Morrisson, “Monnaie et finances,” 308.

²³⁶ *La géographie d'Edrisi*, 2:126.

²³⁷ Ibid., 124–26. On the Peloponnese, see also the documentation assembled in Kordoses, “Τό ἐμπορίο.”

²³⁸ *La géographie d'Edrisi*, 2:296.

²³⁹ Lambros, *Μιχαὴλ Ἀκομινάτου*, 1:181.

²⁴⁰ Lilie, *Handel und Politik*, 272–73; M. E. Martin, “The First Venetians in the Black Sea,” *Ἀρχαῖον Πόντου* 35 (1978): 111–22, says that the Venetians and the Genoese did, indeed, have access to the Black Sea in the 12th century but that it held little interest for them.

²⁴¹ Vryonis, *Decline*, 15ff.

²⁴² Attaleiates, 148; Skylitzes, 451.

Agents of Exchange: The Merchant

Who were the Byzantine merchants in this period, and what were their activities? There were, undoubtedly, the small-scale merchants who engaged in trading at local fairs, in a continuation of what we have seen in the ninth and tenth centuries. There were also retail merchants dealing in the country-city exchange. Details about them, however, are not easy to find. There were, of course, retail merchants serving the population of the cities.

But there were also merchants, in both the eleventh and the twelfth century, who were active in the sea trade, both domestic and international, that was becoming the throughway of the Commercial Revolution. Evidence from a number of sources attests to this. It must be stressed that the sources are quite recalcitrant, since very often the references to Byzantine merchants are there by the merest chance. Therefore, what follows can only be indicative of the geographic scope of the activities of Byzantine merchants in the eleventh and twelfth centuries; much more difficult is the estimation of the importance of their activities.

Let us, first, take Cairo, which was certainly one of the great outlets of the eastern trade, and to which Byzantine exports of strategic value had been forbidden by Leo VI. Chance references place Byzantine merchants in Cairo in the very early twelfth century (shortly after 1102). At that time, we are told, many merchants from Byzantium (from Constantinople, if the source is taken literally) went to Cairo with many kinds of merchandise. They were very rich, and they seem well acquainted with the prerequisites of trade in Cairo, that is, the various duties one paid.²⁴³ This is simply corroborative evidence for what had already been known from the documents of the Cairo Geniza, studied and interpreted by S. Goitein. Until the middle of the twelfth century, the Geniza documents use the term *Rumi* (Roman) to designate all Christian merchants who went to Egypt; the name may indicate a predominance of Byzantine traders, especially if one realizes that, by contrast, at around the middle of the twelfth century the generic name for western merchants becomes *Ifranj*, the Franks, thus marking a real change. In any case, in the twelfth century, Byzantine merchants came from Constantinople to Cairo and Alexandria in search of spices, and apparently in numbers significant enough to influence the market. There is probably also evidence of the presence of Byzantine merchants in Palestine. They bought mostly spices and expensive wood and perhaps indigo. They exported silk cloth, brocade bedcovers that fetched a high price, wooden furniture, and thyme and cheese from Crete. So this was not only a luxury trade, but involved some alimentary products as well.²⁴⁴ In the early

²⁴³ Orderic Vitalis, *The Ecclesiastical History*, ed. and trans. M. Chibnall (Oxford, 1975), 5:X.23. The other western sources that discuss these events, for instance, Albert of Aix, do not mention the Byzantine merchants—an indication of the chance nature of our sources.

²⁴⁴ S. D. Goitein, *A Mediterranean Society: Economic Foundations* (Berkeley, 1967), 42–59, 103, 211; idem, “Mediterranean Trade in the Eleventh Century: Some Facts and Problems,” in *Studies in the Economic History of the Middle Ages*, ed. M. A. Cook (London, 1971), 51–62; Laiou, “Byzantine Traders,” 81–82.

1170s, Benjamin of Tudela mentions Byzantine merchants in Alexandria as well as in the western Mediterranean, in Barcelona and Montpellier; what they were doing in southern France and Catalonia, and in what numbers they were there, is hard to say. Byzantine merchants also traveled to Russia, perhaps as far north as Novgorod.²⁴⁵

Byzantine merchants in Egypt are attested until the very end of the twelfth century. In 1192 a number of them (πραγματευταί) went to Egypt, along with ambassadors sent to Saladin by Isaac II. On the return trip, the merchants had in their possession merchandise and/or cash valued at 39,000 hyperpyra, presumably the proceeds from their trading activity. On the same ship there were also items valued at 6,675 hyperpyra that belonged to the emperor, and goods valued at 50,000 hyperpyra, the property of his brother Alexios.²⁴⁶ What this imperial property represented is an intriguing question: were Isaac and his brother procuring luxury items from Egypt for their own use, or are we seeing an unusual, even unique, phenomenon—investment in trade by members of the imperial family?²⁴⁷ Whatever the case may be, there is one other aspect of this affair that is of immediate interest to us here; the Greek merchants, and the Byzantine ambassadors, boarded not a Byzantine ship but a Venetian one; and on their way back they were attacked by Genoese and Pisan pirates. This is indicative of the times: the Byzantines had certainly been supplanted in these markets by the Italian merchants, and although Byzantine merchants would appear again in Egypt in the thirteenth and fourteenth centuries, their presence was quite puny compared to that of the Venetians and the Genoese.

We have very little information about who the Byzantine merchants were, and virtually no names for this period, with one or two exceptions. One of the exceptions is a man named Mavrix, who gave Alexios I some money at a time of need. He is described as a man who acquired great wealth from the sea, so he might be a merchant as well as a pirate.²⁴⁸ In the late twelfth century, we know of a man named Kalomodios, who was both a money changer, or banker, and a merchant who “often set forth on long and arduous journeys for purposes of trade.” He was concerned with making money and apparently was successful at it, for he became very rich. When the tax collectors confiscated his property and arrested him, the merchants of Constantinople rose in a near-rebellion, until they were able to secure his release.²⁴⁹ Although little can be said about the merchants generally from such limited information, a few things are clear. For one, the merchants could become very rich,²⁵⁰ but their prosperity could easily be

²⁴⁵ G. G. Litavrin, A. P. Kazhdan, and Z. V. Udaltsova, “*Ekonomicheskie i politicheskie otnosheniia drevnei Rusi i Vizantii v XI–pervoi polovine XIII v.*,” *Proceedings of the Thirteenth International Congress of Byzantine Studies* (London, 1967), 73.

²⁴⁶ MM 3:37–40. Cf. Laiou, “Economic and Noneconomic Exchange,” 693, and A. E. Laiou, “Byzantine Trade with Christians and Muslims and the Crusades,” in *The Crusades from the Perspective of Byzantium and the Muslim World*, ed. A. E. Laiou and R. P. Mottahedeh (Washington, D.C., 2001), 157–60. Cf. *ibid.*, 176–77, on the power of merchants in the late 12th century.

²⁴⁷ Unique, that is, for the 12th century; such direct involvement is observable in the 14th and 15th centuries. The investments of Empress Theodora must also not be forgotten.

²⁴⁸ *Nicephori Bryennii Historiarum libri quattuor*, ed. P. Gautier (Brussels, 1975), 197, 199. Hendy, *Studies*, 241.

²⁴⁹ Choniates, 523–24. On Kalomodios, see also Dagron, “Urban Economy,” 438.

²⁵⁰ In the 1140s, the canonist Aristenos, who was not given to extravagant glossing, neverthe-

undermined by greedy emperors or imperial officials. For another thing, in a period when our sources, focusing on the aristocracy, provide information about even quite undistinguished members of the various aristocratic houses, it is striking to see that not one person of aristocratic lineage is ever said to have been a merchant or a banker. This is, perhaps, not surprising, but it is, nevertheless, worth pointing out, since in the same period we have the Italian way, in which aristocrats and nobles did, indeed, participate in trade.

As to the effect of the expansion of the Italian merchants in Byzantium, it has to be seen in the proper economic context. The higher level of demand certainly affected trade positively. But what about the participation of the Byzantine merchant in this expanded trade, which is not at all the same thing?²⁵¹ The privileges granted to the Venetians primarily and most fully, starting in 1082, and to the Genoese and the Pisans subsequently, unquestionably gave the Italian merchants a significant edge over Byzantine ones. While the privileges originally abolished the import-export duties, soon thereafter they also abolished (in the case of Venice, in 1126) or reduced significantly (in the case of the other maritime states) the internal duties on commercial transactions. This immediately gave Venetian merchants a profit of 10% (or whatever the duty was that Byzantines paid) over all sales transactions, including those with Byzantines, and therefore increased significantly their competitive edge over native merchants. The only people who could compete with Venetians on equal terms as far as this aspect of trade was concerned were those who also had tax privileges (e.g., the monasteries) and the merchants of towns to which the Venetians did not have free entry: Monemvasia and possibly Thessalonike.²⁵² The others worked at a disadvantage. Manifestly, the Venetians, from their privileged position, could afford to offer higher prices to the Byzantine producer, thus giving him an incentive to sell to western rather than to Byzantine merchants. There is, in any case, no question that Byzantine producers did sell to Venetians. Manifestly also, the Venetians could afford to cooperate with Byzantine merchants, perhaps sharing some of the profits from the tax exemption, which means that even Byzantine merchants might use Venetians as middlemen. But that cooperation, which could be profitable to Byzantine merchants for a while, inexorably led to a situation where the Venetians (here used as paradigmatic for all privileged Italian traders) would become important in domestic trade, and the terms of cooperation would become very costly for the Byzantines.²⁵³

That Venetian traders became very active in domestic trade in the twelfth century

less glossed canon 10 of Serdica to talk about “wealthy merchants”: Rhallés and Potlès, *Σύνταγμα*, 3:256ff.

²⁵¹ The most interesting and cogent arguments have been made by M. Hendy in “Byzantium, 1081–1204: An Economic Reappraisal” and “‘Byzantium, 1081–1204’: The Economy Revisited Twenty Years On” in idem, *Economy*; he has argued for the beneficial effects of the Italians on the Byzantine economy of exchange. Cf. also Lilie, *Handel und Politik*, passim, and D. Jacoby, “Italian Privileges and Trade in Byzantium before the Fourth Crusade: A Reconsideration,” *Annuario de estudios medievales* 24 (1994): 349–68. On what follows, cf. Oikonomides, “Role of the Byzantine State,” 1052ff, and Dagron, “Urban Economy,” 402–3, with a somewhat different emphasis.

²⁵² Magdalino, *Manuel*, 148–50.

²⁵³ For all this, see Laiou, “Byzantine Traders.”

is well established. They were active in the major maritime outlets; they traded in grain in Halmyros (a flourishing trade center that collected the grain of Thessaly and western Greece and had replaced Demetrias in this role), in oil and wine in the Peloponnese, from Sparta and Corinth. Thebes was a city of primary importance for Venetian trade; it was the cloth trade that was lucrative here. Venetians traded also in Smyrna, Adramyttion, and Crete. The trade in agricultural and bulk products—oil, raisins, wax, grain, cotton, cloth, soap—is more important for our purposes than the trade in spices, although the latter may have been more interesting to the Italians; for trade in agricultural products means that the domestic market was, in part at least, in the hands of the Italians, and correspondingly out of the hands of the Byzantines. While it can be argued that there would not have been such an active trade without the Italian presence, that must be qualified to take into account the demographic changes as well as the monetization of new areas (Bulgaria), which would have increased trade anyway. The activities of western traders certainly made for a more active market; but I think that in the long term the beneficial effects of this not for trade but for the Byzantine merchant became negative; or, to put it somewhat more mildly, by the end of the twelfth century the *relative* participation of Byzantines (relative with regard to the Italians) in both foreign and domestic trade decreased. The incident of 1192, related above, may serve as an example of what was happening in this late period. Byzantine merchants sailed to Egypt, but on a Venetian ship; there was cooperation, but on Venetian terms; and, less importantly perhaps, the Byzantine merchants became embroiled in the hostilities between the Italian city-states.

The importance of domestic trade for the Venetians is confirmed if one looks at the number and location of the cities and towns where they demanded and received commercial privileges from 1082 to 1198. Not only did the number grow, but the later documents included cities in the interior that were useful only for domestic trade or, in any case, bulk trade, not spices. By this time, the Byzantines had become aware of the adverse effects of the privileges, which explains not only the hostility of the sources (all, it must be admitted, Constantinopolitan) to the Venetians, but also to some extent (for he had good political reasons as well) Manuel I's unsuccessful effort to throw Venetian merchants out of the empire.²⁵⁴

The Komnenian emperors did not, on the whole, take much action to help their merchants. The one measure that indirectly benefited commercial activity was the novel of Andronikos I regarding shipwreck and salvage. In the strictest possible terms, the emperor forbade people to steal the cargo and dismantle the ships that were cast ashore by storms, as apparently they had done until then, despite the legislation, including a novel of Leo VI. Andronikos went beyond pious words, threatening that those who contravened his orders would be suspended from the mast of the ship, to be visible to all, and "stand as a symbol that no one should ever again dismantle ships and plunder their cargoes, in the same manner that God stretched his bow in the sky

²⁵⁴ Magdalino, *Manuel*, 147. The cities where the privileges applied may be found in Lilie, *Handel und Politik*; cf. Jacoby, "Italian Privileges."

as a sign that never again shall there be water for a deluge.”²⁵⁵ But this was an exceptional man and an exceptional measure. The Komnenoi were not visibly concerned with the welfare of the merchants, being more interested in the welfare of their very large extended family, which constituted the upper reaches of the Byzantine aristocracy.

It had been otherwise in the eleventh century. Indeed, the period between the death of Basil II and the accession of Alexios I can be considered as the period in which the merchants (as well as the artisans) came close to achieving a certain political power that would go together with the economic power they were acquiring.²⁵⁶ This was also, interestingly enough, a period when some of our sources exhibit a good knowledge of the functioning of the marketplace. Attaleiates is a good case in point, and so is Michael Psellos, who, although he had contempt for the people of the marketplace, nevertheless, in his *vita* of St. Auxentios, shows an understanding of the laws of supply and demand. This “opening” of Byzantine society, however, did not survive. Alexios I was the representative of an uncompromising aristocracy, and it was he who changed the composition of the senate to reflect the interests of a new imperial aristocracy that excluded those who had chosen to make a living by commerce (τὸ τῆς πραγματείας . . . κέρδος).²⁵⁷ The political and social evolution of the merchant was blocked by the accession of the Komnenoi to power, and indeed the Komnenian state—and the church—tried to enforce a hierarchical view of society, in which the activities and status of the aristocracy, the army, and the rest of society are clearly divided. Thus canonical prohibitions of the participation of members of the clergy in “dishonorable” trades, including commerce and moneylending, as well as in banking and in medicine were reinforced and extended, Balsamon even, in one passage, forbidding clerical investment in trade as well as the practice of it.²⁵⁸ This is not to say that the church stopped being deeply involved in trade and even moneylending; far from it. It simply means that the state and the official church were trying to retain a view of society that was traditional but also new, reinforced by the aristocratic ideals of the twelfth century.

Attitudes toward the merchant and mercantile enterprise were nuanced. On the one hand, there is a certain understanding of the ways of mercantile activity and a certain acceptance of them. Thus both John Mauropous in the eleventh century and Constantine Manasses in the twelfth spoke of the great risks people run in pursuit of mercantile profit, in a way that shows understanding and acceptance as well.²⁵⁹ Even Choni-

²⁵⁵ Choniates, 326–29. English translation by H. J. Magoulias, *O City of Byzantium: Annals of Nicetas Choniates* (Detroit, 1984), 181.

²⁵⁶ Cf. Dagron, “Urban Economy,” 415–16, and E. Papagianni, “Byzantine Legislation on Economic Activity Relative to Social Class,” *EHB* 1092.

²⁵⁷ Zepos, *Jus*, 1:645–56. On attitudes toward the merchants, see also Dagron, “Urban Economy.”

²⁵⁸ See E. Papagianni, “Ἐπιτρεπόμενες καὶ ἀπαγορευμένες ἐνασχολήσεις τοῦ Βυζαντινοῦ κλήρου,” *Δ' Πανελλήνιο Ἱστορικό Συνέδριο, Πρακτικά* (Thessalonike, 1983), 147–66, and A. Laiou, “God and Mammon,” 285ff.

²⁵⁹ Karpozilos, *Letters of Ioannes Mauropous*, 53; O. Mazal, *Der Roman des Konstantinos Manasses: Überlieferung, Rekonstruktion, Textausgabe der Fragmente* (Vienna, 1967), 209.

ates, for his own reasons, perhaps, understands quite well that Venetian merchants could not function in the uncertainty that the repeal and reissue of imperial privileges presented to them. Tzetzes, too, shows an understanding of the laws of trade and a certain sympathy for the plight of peddlers of fish and fruit.²⁶⁰ At the same time, old traditional attitudes according to which the profession of merchant is a low one, and suspect, for it entails lying and dealing in the marketplace, are rediscovered and re-used. The lowest rank of merchant, the retail seller of food (*kapelos*) comes in for a drubbing, but mercantile activity in general becomes suspect, especially in the twelfth century with its emphasis on the rights, prerogatives, and general value of the aristocracy.²⁶¹ It is, perhaps, characteristic that our sources, on the one hand, show a hostility to western merchants that in its language combines a hostility to both their foreignness and their trade, and, on the other hand, show no specific concern for the effects of trade privileges on the Byzantine merchant. However, it is important not to exaggerate, and to see both the nuances in this position, and the change between the eleventh and the twelfth century.

Markets and Fairs

Permanent and periodic markets are attested with increased frequency in this period. The great market of Constantinople is described on several occasions by Michael Psellos. Attaleiates, too, has a wonderful description of the marketplace during Easter.²⁶² The other cities where trade was carried out must have had permanent markets. Entirely episodic markets are also attested, such as those established by Alexios I and Manuel I to serve the needs of the Crusaders as they passed through the empire; there was also the *foros* established in Demetrias at the request of five shiploads of Arab pirates who said "we have come not to make war, but to trade, and to sell the captives and the loot we have collected. . . . Let us trade." It was, however, a ruse, and they took the city.²⁶³

There were also fairs. Low-frequency, that is, annual, fairs serve the function of distributing merchandise over an area of varied extent, for the distribution of merchan-

²⁶⁰ *Ioannis Tzetzae Epistulae*, ed. P. A. Leone (Leipzig, 1972), 79–84, and E. Papagianni, "Μοναχοί καὶ μαύρη αγορά στὸ 12ο αἰ. Παρατηρήσεις σὲ προβλήματα τοῦ Επαρχικοῦ Βιβλίου," *Βυζαντικά* 8 (1988): 61–76.

²⁶¹ Cf. A. R. Littlewood, *Michael Psellos, Oratoria minora* (Leipzig, 1985), nos. 13 and 14 (pp. 48–57). A. Giardina, in an otherwise excellent article, exaggerates the unchanging nature of Byzantine attitudes toward trade: "Modi di scambio e valori sociali nel mondo bizantino (IV–XII secolo)," in *Mercati e mercanti* (as above, note 1), 523–84. On the *kapelos*, and for further discussion of attitudes, see Dagron, "Urban Economy," 415–17, 459–61.

²⁶² Attaleiates, 12–13.

²⁶³ On fairs generally, see Sp. Vryonis, Jr., "The *Panegyris* of the Byzantine Saint: A Study in the Nature of a Medieval Institution, Its Origins and Fate," in *The Byzantine Saint*, ed. S. Hackel (London, 1981), 196–226; Laiou, "Händler und Kaufleute." For Demetrias, see G. G. Litavrin, *Sovety i rasskazy Kekavmena* (Moscow, 1972), 184–86 (date of the capture, the 1030s or 1040s); for the markets established to provision the crusaders, see *Alexias*, 10.9.9, 10.10.3; Choniates, 61; Sp. Lambros, "Αὐτοκρατόρων τοῦ Βυζαντίου χρυσόβουλλα καὶ χρυσᾶ γράμματα," *Νέος Ἑλλ.* 11 (1914): 113; Laiou, "Byzantine Trade with Christians and Muslims," 161–68.

dise that is not to be consumed on the spot. According to a recent study, local fairs in the Roman Empire lasted for one to two days, had a catchment area (area from which participants travel) of less than 50 km, a low volume of transactions, and were marked by predominantly direct sales between traders and consumers. Regional fairs lasted for one to two weeks, had a catchment area of between 50 and 300 km, a larger volume of transactions, and there was trade between merchants and specialized producers or retailers. Interregional fairs might last for three to eight weeks, have a high turnover, a catchment area of more than 300 km, and deal primarily in luxury goods. As I have indicated above, distance is less useful than function as a factor of differentiation. The site of interregional fairs is an *entrepôt*, where luxury goods are bought and sold in bulk. The need for fairs can be obviated by well-established permanent trade centers, which make it unnecessary for merchants or merchants and consumers to meet at specified periods. Fairs, in other words, can be both complementary to permanent markets and substitutes for them.²⁶⁴

In the Byzantine Empire of this period, fairs of all types are attested in both cities and the countryside; some of the latter depended on lay and ecclesiastical landlords, that is, they were either established by them or owed dues to them, or both. The dues would include both the tax on transactions and, possibly, rent for the spaces used by merchants. Fairs were commonly held on the feast day of a saint; indeed Balsamon complains about people who go to various locations on feast days and engage in trade.²⁶⁵ Athens held a fair on 15 August, the day of the Dormition of the Virgin, but we do not know how large an area it served; it probably was not very extensive.²⁶⁶ Local fairs are attested: in the twelfth century, there was a fair in a village named Kouperion, near Tzurulos, in Thrace, on the feast of St. George (23 April); the dues on it were collected by a monastery. Gregory Pakourianos established a fair at his monastery of Bachkovo, on Easter day: it sounds like a local fair, where he expected his monks to buy necessities, such as clothing. It is noteworthy that the monks were not supposed to be self-sufficient; on the contrary, they were each to receive money, with which to buy the necessary things. The monastery of Kosmosoteira was well endowed with lands by its founder, Isaac Komnenos, in 1152. It was near Ainos, in Thrace, a grain-producing area. It was also an area with much trade and permanent markets: the city of Ainos itself, where the monastery was to buy wine and oil, the *emporion* of Sagoudaous, which Isaac retained until his death, to be given to the monastery thereafter. There was also an annual fair at Neokastron, whose dues he ceded to the monastery. We do not know what kind of fair it was, but the existence of permanent markets in the vicinity suggests that this had a different function; perhaps it catered to regional trade, or, possibly, it was an outlet for Isaac's own estates.

A regional fair that is said to have lasted for twelve or thirty days may have existed

²⁶⁴ De Ligt, *Fairs and Markets*, passim, esp. 18ff, and chap. 3; cf. above, 709–10.

²⁶⁵ Rhalles and Potles, *Σύνταγμα* 2:483.

²⁶⁶ Εὐθυμίου τοῦ Μαλάκη τὰ σωζόμενα, ed. K. Bones (Athens, 1937, 1949), 1:72 (in Magdalino, *Manuel*, 158).

in Chaonioupolis, in Epiros. Alexios I transferred the rights to the revenues of this fair to the bishop of Dryinoupolis.²⁶⁷ The great fair at Chonai, in Asia Minor, on the feast of St. Michael, served a large area, including Lycia, Caria, Lydia, Ionia, Pamphylia, and Turks from Iconium: it was clearly a regional fair of some importance.²⁶⁸

Interregional fairs are by their nature much rarer. There are two that can certainly come under this category in this period. The city of Trebizond had a long-established fair, with an interregional character, which has already been described. It apparently was discontinued at the very end of the eleventh century, when the city was temporarily taken by the Seljuks, and the trade routes were disrupted: the author of the *Miracles* of St. Eugenios says that the fair was “forgotten, because the things necessary for it were absent.” The same source suggests that this fair was more than once discontinued, presumably for political reasons. Eventually, the fair was established again.²⁶⁹ The best-known interregional fair is that of Thessalonike, held on the feast of St. Demetrios, and described in some detail in the twelfth-century satire *Timarion*, which called it the greatest of all fairs. People came from the vicinity, but also from all parts of Greece, the Balkans up to the Danube, from Italy, Spain, Portugal, and France. When allowances have been made for exaggeration, we are still left with a large international fair, and the discussion of the merchandise brought here is realistic. From Boeotia (Thebes), the Peloponnese, and Italy came textiles by way of the sea; merchandise, also cloth, came from Syria, Egypt, and Spain. There came also the merchandise of the Black Sea, but this did not come directly but rather by way of Constantinople: from there, great caravans brought the merchandise to Thessalonike along the Via Egnatia. This was a large and specialized market, apparently for textiles and cattle, sheep, and pigs.²⁷⁰ The fair of Thessalonike continued to exist in the fourteenth and fifteenth centuries, but there is no information as to its function in that period.

Money and Credit Mechanisms

The development of trade was attended by, and is further manifested in, an increase in the production and circulation of money. Copper coins in particular, used in small-scale commercial exchanges, are found in very large numbers in archaeological sites, from the Danubian areas to Greece proper, throughout this period. Furthermore, in the eleventh century there is the creation of fractional denominations, again responding to the need for a more flexible means of payment for commodities of moderate value. The mint of Thessalonike functioned now on a permanent basis, and another one was probably opened in central Greece. Finally, the first major devaluation of the coin-

²⁶⁷ For the documentation on this and all the other cases discussed above, see Laiou, “Händler und Kaufleute.”

²⁶⁸ Lambros, *Μιχαὴλ Ἀκομινάτου*, 1:56.

²⁶⁹ Papadopoulos-Kerameus, *Sbornik Istochnikov po istorii Trapezundskoy Imperii*, 1:59; Vryonis, *Decline*, 160.

²⁷⁰ *Pseudo Luciano, Timarione*, ed. R. Romano (Naples, 1974), 53–55; cf. A. Laiou, “Ἡ Θεσσαλονίκη, ἡ ἐνδοχώρα τῆς καὶ ὁ οἰκονομικὸς τῆς χώρας στὴν ἐποχὴ τῶν Παλαιολόγων,” *Βυζαντινὴ Μακεδονία, 324–1430* (Thessalonike, 1995), 183–94. On this, cf. Dagron, “Urban Economy,” 402.

age under Constantine IX (a more serious one than the slow devaluation of the late 10th century) has been interpreted as a devaluation of expansion, which responded to the greater volume of transactions. A second devaluation, during the reign of Michael VII, was, on the contrary, an unhealthy devaluation, resulting in highly debased coin. Alexios I undertook a complete reform of the coinage, with a spread of denominations, which remained relatively stable until the late twelfth century.²⁷¹

There seems to have been, in the course of the eleventh and twelfth centuries, and possibly since the late tenth century, a certain pressure on available capital. This may be seen in the slow devaluation of the coinage, which has been discussed by C. Morrisson, and it can also be seen in the development of credit and interest rates. Probably in the late tenth century, since the development had already taken place by the time the *Peira* was compiled, the effective interest rates had risen, from a scale of 4%, 6%, 8%, 12% to one of 5.55%, 8.33%, 16.66%.²⁷² The effective rate seems to have fluctuated around a norm of 8.33%. This is far from a catastrophic rise; indeed the twelfth-century rates are comparable to those in Venice in the late thirteenth century (5–8%), after a considerable drop in the course of that century. The upward sliding of the interest rates in the Byzantine Empire may be compared to the slow devaluation of the coinage.

The new rates seem to have been recognized and enforced by the courts, even though the law did not change. Did they influence the conditions of investment in trade? Or, to put it differently, did they make it possible for merchants to tap the very considerable resources of the aristocracy? The new interest rates could be expected to have the following effect. The low interest rate permitted to members of the aristocracy (5.55%) now begins to compare favorably with the yield on rents (5.15–5.67%) in urban real estate; one should also bear in mind that it is not at all clear that the low interest allowed to aristocrats obtained also for their investments in sea-loans, which had always carried the highest rate.²⁷³ Thus the inherent economic disincentive for the involvement of aristocrats' capital in trade was lifted. At the same time, there is clear evidence that the Byzantines had developed ways of bypassing the interest legislation similar to those developed in western Europe, where interest was formally prohibited. That is to say, there is evidence that clerics (who were not allowed to lend at interest) were making fictitious partnerships, where the interest was couched as a share in the profits (but not in the risks), thus covering the transaction with a veneer of quasi-legitimacy. With

²⁷¹ C. Morrisson, "La dévaluation de la monnaie byzantine au XIe siècle: Essai d'interprétation," *TM* 6 (1976): 3–53; eadem, "Diffusion"; Hendy, "Byzantium, 1081–1204: An Economic Reappraisal"; idem, *Studies*, 513–19. For a detailed discussion, see Morrisson, "Byzantine Money," 932–33.

²⁷² For this and the subsequent discussion, see Laiou, "God and Mammon," and eadem, "Byzantium and the Commercial Revolution." Cf. Gofas, "Interest."

²⁷³ N. Oikonomides, "Quelques boutiques de Constantinople au Xe s.: Prix, loyers, imposition (Cod. Patmiacus 171)," *DOP* 26 (1972): 251–53. The rent yield and the return on investment through the *roga* (9.72%) discussed in this work are from the 10th century. In the 11th century, the yield of the *roga* fell to 8.33%: Oikonomides, "Title and Income at the Byzantine Court," in *Byzantine Court Culture from 829 to 1204*, ed. H. Maguire (Washington, D.C., 1997), 199–215.

such arrangements, of course, the hidden interest could exceed the norm. What the clergy could do, the aristocracy could also, in theory, do. There is, indeed, evidence, which is usually misinterpreted, to show that merchants exerted considerable pressure on members of the landowning aristocracy to invest their funds in trade.²⁷⁴

Beyond such indirect evidence we can, unfortunately, not go. It suggests that there was need for capital to invest in trade, that there were mechanisms that facilitated the tapping of capital from sources that were normally unavailable (the church and the landowning aristocracy), and that trade was profitable. From the pen of Eustathios of Thessalonike we know that monks were acutely aware of the profits to be made in both trade and lending at interest and that they engaged in both. The extent of such investment with middlemen is impossible to recover. Equally, in the case of the aristocracy, it is difficult to know how much they invested in trade; certainly, the large amounts of cash and jewels hoarded by great aristocrats indicate that some of their money remained idle.²⁷⁵ I think we can safely say that landowners had the opportunity to invest in trade and did so; but I very much doubt that their estate, when they died, included a high proportion of debts or loans or investments in commercial contracts. In any case, the existing testaments show nothing of the kind. The ideological objection to commerce for the aristocracy must have played a role here too, especially as it was reinforced by the Komnenian church and state, and this certainly must have been a constraint on the further development of Byzantine trade.

Conclusion

The general lines of the economy of exchange from the seventh through the twelfth century can thus be established. In the earlier period, economic exchange was hampered by insecurity, very low resources, very low monetary circulation, and certainly by the fact that large portions of the economy were outside the monetary and exchange sectors—the army received its sustenance in great part from the land. On the other hand, even in these conditions some exchange took place, more than is usually admitted. While barter undoubtedly was important, both in small markets and in trade with the Bulgarians, for example, evidence for cash exchanges also exists. Noneconomic exchange, if one keeps the army out of the discussion, is evident in some gifts to outsiders and in the payment of ransom. But it is less than one might posit in theory, for the resources of the state were generally very low, and great gifts could not be easily afforded. The state played an important role in the organization of silk production and trade, and possibly in the grain trade, so that one may speak, in this period, of the existence of administered and tied trade. As far as the economy of exchange is concerned, the collection of taxes in cash and the slow reestablishment of security were positive factors. The ninth and tenth centuries are characterized by active trade as well as by noneconomic exchange, in the form of gifts. But the latter had a restricted eco-

²⁷⁴ For this interpretation of Kekaumenos' statement, see Laiou, "God and Mammon," 281–82.

²⁷⁵ On this, see Morrisson, "Byzantine Money," 939–40.

conomic role, except with regard to the production and circulation of silk and the circulation of gold coins.

In the tenth century, economic exchange flourished, in both Constantinople and the provinces. In the capital, a high degree of control was exercised, and foreign trade generally took place under conditions that were controlled, but in different ways: the entry and circulation of merchandise in Constantinople were controlled, as were the activities of merchants. In the rest of the empire, the control was limited to trade treaties and to the levying of the import tax. Fairs and markets seem to have been ubiquitous by the end of the century, and associations of merchants are evident. In the eleventh and twelfth centuries, there is a general upswing in the economy of exchange in the Mediterranean, and in Byzantium as well. It is now the provinces that show a much greater degree of participation in trade. Monetary circulation is high, and barter, while it certainly existed (it has been pointed out, for example, that the doctors of the monastery of Pantokrator received their salary partly in kind),²⁷⁶ did not play a significant role. In the twelfth century, however, the Byzantine merchant was laboring under two disadvantages: the comparative advantage held by others (Venetians and other Italians, privileged monasteries and perhaps laymen), and the aristocratization of society, which reinforced ideological positions that devalued his profession. The Fourth Crusade, and the Venetian domination of trade in the area, created new conditions at the end of this period.

We have here a mixed economy, with predominance of free trade, but also with state intervention: requisitioning or buying or commissioning silk, intervening possibly to keep the price of grain stable in the long run. In the second case especially, this means that the merchant in the long run had limited influence on the price of this commodity. This is not unique to the Byzantine Empire: in the West too, grain was a commodity in whose price and supply the state intervened.²⁷⁷ But in the West there is a secular rise in the price of grain in the thirteenth century,²⁷⁸ which suggests that state intervention in the price was more successful in the Byzantine Empire. That may have been good for the consumer, but it did mean that the impact of the merchant was correspondingly limited. The fact, also, that great aristocrats made their money primarily from land and from imperial donations reduced their interest in investment in trade, and thus to some (unknown) extent kept an important source of capital only partially available to merchants. This aspect must not be exaggerated, for, as we have seen, the production of large estates was commercialized. But it was an inhibiting factor to greater expansion. In sum, the volume of transactions increased, the role of the Byzantine merchant increased, the exchange economy was active, but there were also barriers and negative factors.

²⁷⁶ Kazhdan, "Iz ekonomicheskoi zhizni," 169–212. Cf. also the novel of Alexios I Komnenos on the payment of the *kanonikon* in both cash and kind: Zepos, *Jus*, 1:311–12.

²⁷⁷ J. Day, "Prix agricoles en Méditerranée," *Annales ESC* 16.2 (1961): 629–56.

²⁷⁸ J. Day, *The Medieval Market Economy* (Oxford, 1987), 113; Spufford, *Money and Its Use*, 243–45.

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Commerce, Trade, Markets, and Money: Thirteenth–Fifteenth Centuries

Klaus-Peter Matschke

The Fourth Crusade opened a new phase in the West's economic penetration of the Byzantine Empire. After 1204 the intermittent presence of Italian merchants in the commercial quarters of various cities turned into a widespread, permanent settlement and colonization of entire regions of the empire. To be sure, in 1261 the Venetians had to relinquish some of their spoils of the crusade and lost their privileged position in Constantinople. However, they were able to hold on to the island of Crete, expand and fortify various other bases, and in the early fifteenth century even gain temporary control of Thessalonike, the second most important city of the empire. As early as 1267 they also regained their original quarter in Constantinople, the restored capital. In 1261 the Genoese were given generous customs privileges and numerous trading bases as a reward for supporting the Byzantine reconquista. But they soon grabbed more than the Byzantines had intended for them by developing the site of Galata/Pera—facing Constantinople across the Golden Horn and assigned to them as a place of settlement—into what was essentially an independent economic competitor of the capital, by establishing a permanent foothold on the island of Chios after clashes that saw their fortunes rise and fall, and by gaining a secure access through the Byzantine straits to the Black Sea and the city of Kaffa as the center of a newly emerging economic region.

In this way the two northern Italian trading powers acquired important entrepôts for economic relations with the East. At the same time, they had now created the geographic and material conditions that allowed them to reach, without impediment, any point in Byzantium and to put the entire economic region in the service of their commercial interests. Latin merchants were a permanent presence in the larger cities of the late Byzantine period and became the chief suppliers to local retailers. They maintained solid trading links with many smaller cities: from Constantinople they regularly brought cloth (*draparia*) to the city of Mesembria on the shores of the Black Sea,¹ and

This chapter was translated by Thomas Dunlap.

¹ G. L. Tafel and G. M. Thomas, *Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig*, 3 vols. (Vienna, 1856–57), 3:244f.

from Thessalonike they supplied the city of Melenikon on the upper reaches of the Strymon River with imported cloths as well.² Latin merchants also went to market in the villages. In addition to textiles, their agents sold metal wares and other western-made trading goods in the settlements (*casalia* and *loca*) of the various regions. The merchants' staff members as well as native purchasers traveled on their behalf looking for favorable deals on agricultural products and textile raw materials; among the goods they acquired on their trips through the countryside were occasional rugs (*tapeta*), most probably from peasant household production.³ Westerners visited urban and rural fairs in pursuit of a variety of commercial interests. They sailed their ships to the many landing sites on the islands and the coasts of the Aegean to buy provisions and load the grain that rural growers carted to market after good harvests. Latin artisans from Constantinople and Pera went to the villages to buy cattle and skins and other raw materials they needed for their work. Making full use of their customs privileges, Latin merchants procured additional export permits and special letters of safe-conduct. The Byzantines were swamped by a flood of textile imports. Soon they also grew dependent on the import of foodstuffs into the imperial territory, which was continuously shrinking and losing its autonomy. To the very end of the empire, the Byzantines were unable to shake off this multifaceted economic infusion from the West.

As the former emperor John Kantakouzenos put it, the Latins' every thought and desire were focused on acquiring goods worth many nomismata at the lowest possible cost.⁴ This Byzantine aristocrat, whose own attitude was governed by the idea of just price, regarded such conduct as fraud and theft. It was in fact all but incomprehensible to him how Westerners could forget this in their dealings with their Byzantine ὁμόφυλοι and act so contrary to nature as to see their commercial successes as strokes of good fortune and boast about them openly. The Byzantine magnate believed that this commercial behavior, this economic mentality, was one reason—perhaps *the* reason—for the hostility between Latins and Byzantines. It is difficult to say whether Byzantine merchants took a similar view. In any case, things got even more difficult for them when the Latins tried to restrict their movements further by denying them the use of western ships, by making access to the Italian colonies more difficult, and by practically excluding them from markets outside the empire. The Latins were aided in their efforts by the traditional weaknesses of Byzantine trade and commerce: its lack of mobility, its aversion to risk-taking, and its embeddedness within a well-developed framework of state control, which had always guaranteed its basic existence but at the same time had restricted its opportunities.

Varieties of Exchange in the Late Byzantine Empire

The year 1204 was not only a political blow to the Byzantine state, but also cast its traditional economic foundation into question, curtailing its influence on production

² Ibid., 278f.

³ G. Bertolotto, "Nuova serie di documenti sulle relazioni di Genova coll'imperio bizantino," *Atti della Società Ligure di Storia Patria* 28 (1898): 514.

⁴ J. Meyendorff, "Projets de concile oecuménique en 1367," *DOP* 14 (1960): 171.

and especially on society's distribution mechanisms. A household system of government replaced a bureaucratic system of government at the center.⁵ The material expenses for the imperial court of the Laskarids and for various other spheres of administration in the empire of Nicaea were for the most part borne by the imperial domains. The imperial aristocracy was redirected toward material income from landholdings and productive agriculture and was disconnected from state sources of income. The emperors in exile in Asia Minor promoted the export of agricultural products and limited the import of commercial goods. In this way they were able to increase the inflow of money, reduce its outflow, and limit the influence of foreign merchants on the economy.

Some traditional structures and mechanisms were reactivated when the Palaiologan dynasty assumed the throne and the Byzantine emperors returned to the old capital. Once again the state apparatus and the imperial household grew to a size that far exceeded the resources and dimensions of a private household based on its own domains. When the emperors went to their summer quarters, the local population had to provide unlimited quantities of food supplies, either free of charge or at preferential prices. The imperial horse and wagon stables were also maintained with cheap grain from the peasantry.⁶ Members of the imperial family had various ways of stocking their private pantries and cellars at no expense.⁷ To alleviate food shortages and secure the food supply to besieged fortresses and invested cities, the state stopped grain shipments by foreign merchants and confiscated the surplus of monasteries.⁸

The restoration of the empire also revived various elements of the traditional imperial ideology along with their economic implications. Michael VIII Palaiologos used generous payments from the treasury filled by the Laskarids to create the political backing that brought him and his family to the throne.⁹ His son Constantine, because he was dispensing largesse on a scale permitted only to emperors,¹⁰ was suspected of plotting to depose his brother, Andronikos II. The free interplay of economic forces was thus once again more strongly controlled and impeded by the administration of an empire seeking to recapture its former glory and by the new holders of political power. Still, the commercial foundation of the late Byzantine economy was certainly not jeopardized, nor was there a substantial reduction in the scale of commercial exchanges. Any such moves would already have been prevented by the presence of Latin merchants, western goods, and western money in the Byzantine markets and in the cities and villages of the empire, and by the potency of the Latin privileges. Those

⁵ M. Angold, "Administration of the Empire of Nicaea," *ByzF* 19 (1993): 136.

⁶ S. Eustratiades, *Γρηγορίου τοῦ Κυπρίου Ἐπιστολαὶ καὶ μῦθοι* (Alexandria, 1910), 116 (no. 132) (hereafter Eustratiades).

⁷ *Ibid.*, 117f.

⁸ Bertolotto, "Nuova serie," 534; *Georgii Pachymeris De Michaele et Andronico Palaeologis libri tredecim*, ed. I. Bekker, 2 vols. (Bonn, 1835), 2:588 (VII.13) (hereafter Pachymeres).

⁹ Cf. K.-P. Matschke, "Regierungsversprechen und Regierungsverhalten in der frühen Palaiologenzeit," in *Geschichte und Kultur der Palaiologenzeit*, ed. W. Seibt (Vienna, 1996), 133–44.

¹⁰ *Nicephori Gregorae Byzantina historia*, ed. L. Schopen, 3 vols. (Bonn, 1829–55), 1:187 (VI.6) (hereafter Gregoras).

privileges made it very difficult for the late Byzantine state to regulate mercantile activity in its various forms, leaving it at best indirect ways of doing so. Attempts to set maximum prices and enforce export restrictions for grain were also unsuccessful in the long run.

Instead, one can observe the opposite trend, that of using state regulation for private commercial activity and of reinterpreting noncommercial forms of exchange. For example, in a letter to Emperor Andronikos II, Patriarch Gregory of Cyprus denounced a group of officials who were abusing their responsibility to care for the imperial horses and pack and draft animals. Their scheme involved redirecting the rye and barley deliveries from the peasantry, intended as fodder, into private granaries and selling them for their own profit. Because they bought cheaply and resold at high prices, in the eyes of the church leader they ceased to be ἵπποκόμοι and ὄρεωκόμοι and turned into κάπηλοι τῶν σπερμάτων.¹¹ Here, too, buying cheap and selling dear is mentioned as a feature of mercantile behavior, but the patriarch seems more indignant about the manner of the cheap purchases than about this basic principle of commercial life. As already noted, John Kantakouzenos later denounced this very principle as fraud and theft. The patriarch emphasized that this was not an isolated case but a common phenomenon of the early Palaiologan period. To prove his point he mentioned those responsible for the imperial table: they, too, took many of the piglets, chickens, and other animals requisitioned from the peasants and sold them privately. The patriarch urged the emperor to issue imperial *prostagmata* declaring such conduct an abuse of authority, to eradicate it or at least cut it back. At the same time he reveals that this was indeed common practice, a result of the fact that both the court itself and the domestic staff were very large. Some well-known people of the early Palaiologan period made great fortunes assessing and collecting taxes; the only explanation is probably that these tasks, still very important at the time, could also be used to pursue a variety of private business dealings. That is the likely scenario in the case of the γεωγράφος, ἐξισωτής, and ἀπογραφεύς Theodore Patrikiotes, though we do not have conclusive proof. His wealth not only allowed him to bail out the state apparatus from financial difficulties in 1340, but he also became a sought-after sponsor and generous donor who distributed money and gifts to his numerous clients. Among them was the freelance poet Manuel Philes. Philes, however, did not see himself as a mere recipient of charity but demanded these gifts as payment for his poetry, which he described as ἐγγράφους φόρους and threatened to withhold if his requests for meat (and other things necessary for everyday life and a modest luxury) were not met.¹² However, the poet's self-confident assertiveness brought him into conflict with prevailing attitudes, which were still resisting the emergence of an independent intelligentsia that was linked to and communicated with society via the market. Only at the very end of Byzantium's existence did these attitudes become somewhat more open to new developments.

¹¹ Eustratiades, 116.

¹² *Manuelis Philae Carmina*, ed. E. Miller, 2 vols. (Paris, 1855), 1:349; cf. G. Stickler, *Manuel Philes und seine Psalmenparaphrase* (Vienna, 1992), 35.

It is probably not entirely coincidental that the urban sphere in the fourteenth century became the center of these special forms of commerce. During the siege of his city by the Turks around 1320, the governor of Philadelphia, Manuel Tagaris, turned his house into a granary and bakery (τὴν αὐτοῦ οἰκίαν εἰς ἓνα . . . σιτῶνα καὶ αὐτὸ ἄρτοπώλιον) and sold the grain that was stored in the city, and was at his disposal, to the hungry residents at high prices.¹³ Evidently he, too, became a kind of grain merchant *qua officio*. The *protosebastos* Leo Kalothetos, who, in the year 1350, wanted to transport grain and salt from Old Phokaia “ad partes et terras amicorum” on Venetian ships,¹⁴ was probably also acting as governor of the city. As such he controlled considerable quantities of foodstuffs, for the seat of his administration was already in the 1340s a collecting point for grain from Turkish areas (“de frumento nato in partibus Turchie”); from there some was transported to the Byzantine capital and some to other places.¹⁵ The basis of such activities was surely the *μιτάτον*, the right of late Byzantine city and provincial governors to procure agricultural products from the inhabitants of their jurisdiction through compulsory sales at nominal prices. Though intended chiefly for the local administration, these products were also used as commercial goods. This turned city governors into feared competitors on the local markets,¹⁶ and in favorable circumstances it even allowed them to gain access to foreign markets. Similar effects flowed from the *προτίμησις* and the *μονοπώλιον*, that is, the right of first purchase for certain goods and the exclusive right to sell wine (and possibly other goods, as well) for a specified period of time. In the late Byzantine period, these privileges were granted preferentially, but not exclusively, to city governors.¹⁷ Finally, certain other functionaries were also given specific access to the market. One example is ὁ τῆς ἀλιευτικῆς προστατῶν (the supervisor of fish dealers), who is mentioned in a letter of Demetrios Kydones from the year 1383(?). He turned εἰς τὸν ἰχθυοπῶλον (“into a fishmonger”) by arbitrarily raising the dues in kind from the fishermen around Constantinople and offering his loot for sale on the market. In the eyes of Kydones, himself a high official, this behavior brought great discredit to the honor of his office.¹⁸

According to the social norms and the code of conduct still valid, a Byzantine landowner could take only his own agricultural surplus to market,¹⁹ an *archon* was essen-

¹³ D. R. Reinsch, *Die Briefe des Matthaios von Ephesos im Codex Vindobonensis Theol. Gr. 174* (Berlin, 1974), 209 (A 18).

¹⁴ *Démétrius Cydonès, Correspondance*, ed. R.-J. Loenertz, 2 vols. (Vatican City, 1956–60) 2: app., 434 (D 1).

¹⁵ Ch. A. Maltezos, *Ὁ Θεσμός τοῦ ἐν Κωνσταντινουπόλει Βενετοῦ βαΐλου, 1268–1453* (Athens, 1970), 230: de inde . . . alias.

¹⁶ L. Maksimović, *The Byzantine Provincial Administration under the Palaiologoi* (Amsterdam, 1988), 159.

¹⁷ Cf. P. Magdalino, “An Unpublished Pronoia Grant of the Second Half of the Fourteenth Century,” *ZRV* 18 (1978): 157, 162. On the occasional exemption of monasteries from this monopoly, cf. A. E. Laiou, “The Agrarian Economy, Thirteenth–Fifteenth Centuries,” *EHB* 368.

¹⁸ *Démétrius Cydonès, Correspondance*, ed. Loenertz, 2:165f (no. 261). See the new interpretation by F. Tinnefeld, *Demetrios Kydones, Briefe*, vol. 3 (Stuttgart, 1999), 72ff.

¹⁹ Cf. K.-P. Matschke, *Die Schlacht bei Ankara und das Schicksal von Byzanz* (Weimar, 1981), 224f.

tially prohibited from engaging in commercial activity,²⁰ and a *stratiotes*, too, should avoid trade because of his military obligations.²¹ However, in late Byzantine daily life, these precepts and prohibitions, formulated for reasons of status, morality, and utility, were probably observed less than ever before in Byzantine history. Not least so because it became increasingly difficult for the social groups concerned to conform their behavior to these norms; with the traditional social arrangements falling apart, those affected were simply forced to violate the norms. Yet at the same time their entry into the market, their behavior in the market, and their introduction and promotion of instruments and mechanisms foreign to the market imparted a very special character to commerce during these years, obstructed the development of the domestic market also from within, and caused or influenced the emergence of some economic phenomena characteristic of the late Byzantine period.

The Primary Locales and Principal Goods of Late Byzantine Domestic Commerce

In the late Byzantine period, trading was carried on everywhere, with all manner of goods, at many different occasions, and by all kinds of people: in the open, in the streets, inside and outside church buildings, in private homes, on peasant farms, in the cabins and on the decks of ships, at riverbanks and on beaches, after the harvest, upon acceding to an inheritance, before an urgent journey, during a military campaign, and after a successful raid, by peasants, artisans, soldiers, private people, churchgoers, robbers, and even slaves who were themselves merchandise, with products of one's own labor and with purchased, inherited, and even captured goods.

However, in Constantinople and other cities of the empire, commercial activity was concentrated in an extensive system of special shops and permanent markets. The sale of foodstuffs to urban consumers was handled by bakers, butchers, and grain, milk, and wine merchants. Commerce involving cloth played an essential role, but its objects, carriers, and forms had changed considerably since the middle Byzantine period. Around 1320, Byzantine customs officials were still trying in various ways to prevent the Venetians from selling *pannos* and *telas* (clothes and cloth) both wholesale (*in grossum*) and retail (*ad minutum*),²² but by this time they were already tilting against windmills. A century later the import of textiles and their wholesale trade were almost entirely in Italian hands, though the business partners to whom wholesalers such as the Venetian Giacomo Badoer sold cloths from various western manufacturing centers, and who then sold it retail, were still almost exclusively Greeks/Byzantines.²³ And in Thes-

²⁰ Cf. A. Ellissen, "Plethons Reden über die Angelegenheiten der Peloponnes," *Analekten der mittel- und neugriechischen Literatur*, 5 vols. (Leipzig, 1855–62), 4:150.

²¹ Cf. *Ioannis Cantacuzeni Historiarum libri IV*, ed. L. Schopen, 3 vols. (Bonn, 1828–32), 1:238 (I.48) (hereafter Kantakouzenos).

²² G. M. Thomas and R. Predelli, *Diplomatarium Veneto-Levanticum*, 2 vols. (Venice, 1880–99), 1:132.

²³ Cf. M. M. Shitikov, "Torgovlia suknom v Konstantinopole i ego okrestnostiakh v pervoi polovine XV v. (po dannym knigi shchetov Dzhakomo Badoera)," *ADSV* 10 (1973): 284.

salonike, the old-established residents were able to preserve their privilege of selling woolen and linen cloth retail even during the period of Venetian rule.²⁴ Special cloth retail shops are also attested toward the end of the thirteenth century in the city of Smyrna.²⁵ Badoer described the native cloth merchants of the capital with the respectful term *drapiéri*. Apparently the traditional Byzantine word, βεστιοπράτης, does not appear in contemporary Greek sources, or only in a modified or even distorted form and in rather obscure places.²⁶ Perhaps this discontinuity in terminology and this terminological vacuum reflect in a special way the profound and long-term changes in an area of the economy that played a key role in economic development in the preindustrial age.

In Constantinople, linen—both raw linen and linen cloth—was sold retail by special *linaruoli* and *linaropuli* also during the late Byzantine period. Linen cloth still came, as it traditionally had, chiefly from Egypt, which was now under Mamluk control.²⁷ Raw linen continued to be very popular in aristocratic households, where wives and servants finished it into products that were probably intended exclusively for domestic use.²⁸ The terms for linen dealers in the *Book of the Eparch* are also no longer found in the late Byzantine period, but at least one of the terms used by Badoer (*linaropuli*) appears to be genuinely Byzantine in origin and thus to have replaced the older words.

Badoer also makes repeated mention of *spiziere*, who offered “siropi e medexine” and other such things.²⁹ Perhaps they are identical with the σαλδαμάριοι rarely mentioned in late Byzantine sources and also ran σαρδαμαρικὰ ἐργαστήρια³⁰ (mentioned only once). N. Oikonomides has described the latter as “magasins d’alimentation générale” (“general grocery stores”), resembling more or less the modern-day *épiceries*.³¹ But perhaps they were also close to the μυρεψοί, that is, apothecaries with their μυρεψικά ἐργαστήρια, who had their own market in Constantinople³² and in Thessalonike still controlled the remnants of their own corporation.³³ Grocers and druggists were difficult to tell apart already during the time of the *Book of the Eparch*. It is almost certain that the strict legal lines of separation that were drawn by the authors of this

²⁴ F. Thiriet, *Régestes des délibérations du Sénat de Venise concernant la Romanie*, 3 vols. (Paris–The Hague, 1958–61), 2:229 (no. 1995).

²⁵ MM 4:286.

²⁶ *Philae Carmina*, ed. Miller, 1:195: ἐσθητοπράτης. PLP 8:138 (no. 20305): βεστοπρώτης (protobestarios? βεστιοπράτης?).

²⁷ G. Badoer, *Il libro dei conti: Costantinopoli, 1436–1440*, ed. U. Dorini and T. Bertelè (Rome, 1956), 105, 167, 367, and elsewhere (hereafter Badoer).

²⁸ Cf. the letter of Lukas Notaras to Gennadios Scholarios, ed. Sp. Lambros, in *Παλαιολογία καὶ Πελοποννησιακά*, 4 vols. (Athens–Leipzig, 1912–30), 2:194.

²⁹ Badoer, 280, and other passages.

³⁰ *Actes de Lavra*, ed. P. Lemerle, A. Guillou, N. Svoronos, and D. Papachryssanthou, *Archives de l’Athos*, 4 vols. (Paris, 1970–81), 3:25 (no. 123).

³¹ N. Oikonomides, *Hommes d’affaires grecs et latins à Constantinople: XIIIe–XVe siècles* (Montreal, 1979), 95.

³² H. A. R. Gibb, *The Travels of Ibn Battuta*, 4 vols. (Cambridge, 1958–94), 2:510.

³³ F. Dölger, *Aus den Schatzkammern des Heiligen Berges* (Munich, 1948), 302f (no. 111); cf. Oikonomides, *Hommes d’affaires*, 111.

regulatory work of the middle Byzantine period³⁴ no longer played a role in the late Byzantine era.

Finally, Badoer mentions in his account book a “botegier de mazarie,” that is, a seller of *minutae merces*.³⁵ Mostly, though, we hear only of *botegieri* and *botege* (shops) without any further specification. They correspond to the (καπηλικὰ) ἐργαστήρια and sometimes also to the ἀποθήκαι in late Byzantine sources, for a western text from the year 1447 speaks of *apoticaire(s)* in the capital who bought a variety of goods from Burgundian captives.³⁶ Stores of this kind probably also existed in the smaller cities, but there are no indications at all of comparable retail outlets in villages. That seems to accord with the actual situation, since in the eyes of contemporaries, ἐργαστήρια (shops) in which money changed hands were typical only of cities.³⁷

At least in the large cities, stores and retail outlets that were largely similar in nature were found in specific places, in ἀγοραί (marketplaces),³⁸ in καμάραι (arcades),³⁹ in *fonticis* (warehouses),⁴⁰ and *nel bazar*.⁴¹ However, outside Constantinople⁴² there is so far no unequivocal evidence for the existence of special grain, meat, fish, and produce markets.⁴³ We do know about a butcher's stall that was supposed to be set up in 1417 next to the Venetian fortress of Korone, but only because it was to receive animals from all parts of the Peloponnese, and thus from the territory of the Byzantine Empire as well. Byzantine agriculture, as that of the Frankish part of the peninsula, profited from the restoration of the *Hexamilion* (a fortified wall across the isthmus of Corinth), at least for a short time.⁴⁴

We also have great difficulties grasping the temporal rhythms of market activity. Only one commercial site in Skoutari is explicitly described as a weekly market, where, at the beginning of the fifteenth century, Latin and Byzantine merchants from Pera and Constantinople met with Turkish buyers and sellers.⁴⁵ But there are some indica-

³⁴ Cf. J. Koder, *Das Eparchenbuch Leons des Weisen* (Vienna, 1991), 112, 118.

³⁵ Badoer, 40, 234, 258.

³⁶ Cf. J. Paviot, “‘Croisade’ bourguignonne et intérêts génois en Mer Noire au milieu du XVe siècle,” *Studi di storia medioevale e di diplomatica* 12/13 (1992): 151: “Stephano, Grec, apoticaire demourant à Constantinoble,” and “Stenon, Grec, apoticaire” as buyers of *graine cramaisy* and *kamocas*.

³⁷ *Démétrius Cydonès, Correspondance*, ed. Loenertz, 2:184 (no. 268). I refer to the translation and commentary in Tinnefeld, *Briefe*, 3:184ff.

³⁸ Cf. K.-P. Matschke, “Die spätbyzantinische Öffentlichkeit,” *Beiträge zur Mentalitätsgeschichte* 2 (1993): 159ff.

³⁹ Cf. G. Dagron, “Poissons, pêcheurs et poissonniers de Constantinople,” in *Constantinople and Its Hinterland*, ed. C. Mango and G. Dagron (Aldershot, 1995), 69f.

⁴⁰ Thomas and Predelli, *Diplomatarium*, 1:189f (no. 91); cf. P. Magdalino, “The Grain Supply of Constantinople, Ninth–Twelfth Centuries,” in *Constantinople and Its Hinterland* (as above, note 39), 44f.

⁴¹ Badoer, 356; A. Roccatagliata, “Con un notaio genovese tra Pera e Chio nel 1453–1454,” *RESEE* 17.2 (1979): 226 (no. 57); cf. Oikonomides, *Hommes d'affaires*, 107.

⁴² P. Canivet and N. Oikonomides, “La Comédie de Katablattas: Invective byzantine du XVe siècle,” *Δίπτυχα* 3 (1982–83): 53ff; Oikonomides, *Hommes d'affaires*, 97ff.

⁴³ Matschke, “Die spätbyzantinische Öffentlichkeit,” 61f, should be corrected along these lines.

⁴⁴ K. Sathas, *Documents inédits relatifs à l'histoire de la Grèce au moyen-âge*, 9 vols. (Paris–Venice, 1880–90), 3:162f (no. 718); cf. Matschke, *Die Schlacht bei Ankara*, 232f.

⁴⁵ U. Lindgreen, *Clavijos Reise nach Samarkand, 1403–1406* (Munich, 1993), 39.

tions that, at least in Constantinople, various weekly markets existed alongside permanent market installations.⁴⁶ Usually we have to be content with the bare information that a market existed. The city of Komotini in the southern foothills of the Rhodope range had one, or possibly even several, substantial markets around 1340. We know this from an incidental report by Nikephoros Gregoras, who recounts in 1344 that the troops of John Kantakouzenos, prior to setting out on a new military campaign, busied about these ἀγοραί to buy everything they needed.⁴⁷

In order to provision larger military contingents, special temporary markets were set up outside cities and, if need be, also behind the city walls in areas where the troops operated or had to pass through.⁴⁸ Byzantine and foreign fleets were fitted out and refitted chiefly in the large port cities, but during their military operations they also called repeatedly at the many σκάλαι on the islands and along the coast of the Aegean to resupply themselves especially with fresh produce and drinking water.⁴⁹ The late Byzantine economy suffered immensely from the random destruction of almost constant warfare, but a good many merchants also made a living from the needs and opportunities of war, and some urban and rural markets profited from it. That also explains some surprising constellations and coalitions of the late Byzantine period that are discussed below.

Late Byzantine Fairs

Annual fairs continued to play a considerable role in the economic life of the late Byzantine period alongside permanent commercial establishments and the weekly markets that we can barely make out.⁵⁰ Some of these πανηγύρεις date back to earlier times, such as the famous St. Demetrios fair of Thessalonike,⁵¹ the St. Michael fair of Chonai,⁵² and a so-called Asomatoi market near Stelaria in Chalkidike.⁵³ Though many fairs are first

⁴⁶ Cf. Oikonomides, *Hommes d'affaires*, 107.

⁴⁷ Gregoras 2:706 (XIV.4); cf. C. Asdracha, *La région des Rhodopes aux XIIIe et XIVe siècles* (Athens, 1976), 197, 221.

⁴⁸ *Georgii Acropolitae Opera*, ed. A. Heisenberg, 2 vols. (Leipzig, 1903), 1:82 (45); *Ioannis Anagnostae De extremo Thessalonicensi excidio*, ed. I. Bekker (Bonn, 1838), 492 (5).

⁴⁹ The attempt, in the joint crusading expedition of 1444, to close the straits and prevent the Turks from crossing over failed chiefly because the Latin naval force was not able to resupply itself along the coast in the area in which it was operating.

⁵⁰ The fundamental work is Sp. Vryonis, Jr., "The Panegyris of the Byzantine Saint: A Study in the Nature of a Medieval Institution, Its Origin and Fate," in *The Byzantine Saint*, ed. S. Hackel (London, 1981), 196–227.

⁵¹ *Ibid.*, 202ff.

⁵² Cf. Sp. Vryonis, Jr., *The Decline of Medieval Hellenism in Asia Minor and the Process of Islamization from the Eleventh through the Fifteenth Century* (Berkeley, 1971), 33f, 154, 222; K. Belke and N. Mersich, *Tabula Imperii Byzantini*, vol. 7, *Phrygien und Pisidien* (Vienna, 1990), 65; E. Kirsten, "Die byzantinische Stadt," *Berichte zum XI. Internationalen Byzantinisten-Kongreß* (Munich, 1961), 75–102. We know that the fair continued into the early 13th century. It is unclear, however, whether it was also held during the short-lived period of the Laskarids.

⁵³ W. Regel, E. Kurtz, and B. Korabiev, "Actes de Philothée," *VizVrem* 20 (1913): 20 (no. 3); cf. F. Dölger, *Regesten der Kaiserurkunden des oströmischen Reiches*, 5 vols. (Munich–Berlin, 1924–65), 3:67

mentioned after 1204 or 1261, this does not rule out that they are much older, since none of them can conclusively be shown to have been set up in the late Byzantine period. Some of these fairs were located in or near larger cities; in addition to Thessalonike, one should mention Skopje at the upper reaches of the Strymon River and Ioannina in Epiros. Most fairs, however, were held in smaller cities, in villages, or even in fairly remote locations. While most of what we know relates to the greater Thessalonike region and the Peloponnese, there is some scattered information from western Asia Minor, from the coastal region of the Adriatic, and from the environs of Constantinople.⁵⁴

A number of late Byzantine fairs are known only from reports by Latin visitors. Occasionally these visitors came from far away and traveled great distances, such as Alberto Stella of Venice. In 1268/69, he took his wares by ship from the Venetian base in Negroponte to the Byzantine naval base at Anaia. From there he went overland “ad civitatem Belongi ad panager,” and after concluding what seems to have been successful business dealings, he headed for the city of Ephesos.⁵⁵ The trade goods that western merchants brought with them were chiefly textiles, what they purchased were mostly agricultural products and raw materials. Only a single visitor to a late Byzantine fair is known to us by name, a certain Corcondille/Krokodeilos from Greater Arachova in the Peloponnese. Apparently he was a local landowner, who, in 1296, appeared as a seller of silk at the Frankish-controlled *Panejour(s)* of Vervaina in the mountain region of Skorta.⁵⁶ Whether peasants from the Byzantine Peloponnese also played a role as suppliers of raw silk at this and other fairs is a question we cannot answer at this time. They themselves were probably most interested in tools and draft animals, as was the peasant Nikodemos in an idyll by Maximos Planoudes (whose work was influenced by Theokritos). Nikodemos visits the fair in the town of Aithra, probably a fictitious name, to find a replacement for his best plowing ox.⁵⁷ Late Byzantine merchants, too, were active at fairs in the territory of the empire, as attested by various privilege charters for the inhabitants of Monemvasia and the Monemvasiots living in Pegai; included in these charters are exemptions from dues at fairs.⁵⁸

(no. 2021); M. A. Poliakovskaia, “Gorodskie vladeniia provintsial’nykh monastyrei v pozdnei Vizantii,” *VizVrem* 24 (1964): 208.

⁵⁴ To date no systematic survey of late Byzantine fairs has been done. The relevant material has been collected only for certain regions. Cf. J. Lefort, *Villages de Macédoine*, vol. 1, *La Chalcidique occidentale*, TM, Monographies 1 (Paris, 1982), passim. A. I. Lampropoulou, “Οἱ πανηγύρεις στὴν Πελοπόννησο κατὰ τὴ μεσαιωνικὴ ἐποχὴ,” in *Ἡ καθημερινὴ ζωὴ στο βυζάντιο* (Athens, 1989), 291–310. C. Asdracha, “Les foires en Epire médiévale: La fonction justificative de la mémoire historique,” *JÖB* 32.2 (1982): 437–46.

⁵⁵ Tafel and Thomas, *Urkunden*, 3:193.

⁵⁶ J. Longnon, *Livre de la conquête de la principauté de l’Amorée: Chronique de Morée, 1204–1305* (Paris, 1911), 319 (§ 802); cf. D. Jacoby, “Silk Production in the Frankish Peloponnese: The Evidence of the Fourteenth-Century Surveys and Reports,” in *Travellers and Officials in the Peloponnese: Descriptions—Reports—Statistics* (Monemvasia, 1994), 45. Cf. also Laiou, “The Agrarian Economy,” 323.

⁵⁷ C. R. von Holzinger, *Ein Idyll des Maximus Planudes* (Vienna, 1893), 12f.

⁵⁸ P. Schreiner, “Ein Prostagma Andronikos’ III. für die Monembasioten in Pegai (1328) und das gefälschte Chrysobull Andronikos’ II. für die Monembasioten im byzantinischen Reich,” *JÖB* 27 (1978): 211–23.

All fairs for which we have relevant information were under the authority of church institutions and ecclesiastical dignitaries, from the Great Church of Constantinople to a few small *metochia* in the provinces. The Great Lavra on Mount Athos even controlled a considerable number of fairs.⁵⁹ The fact that in 1294 a certain Manuel Tzamandras took steps against various Genoese cloth merchants at the “panizerium de Mandara” on behalf of an unnamed “sevastio picherni,” does not necessarily indicate that this fair, probably located in Asia Minor, did not also lie within the church’s jurisdiction.⁶⁰ Church influence on the fairs resulted from the close connection between market activities and the feasts of the patron saints of churches and monasteries. The bishops and abbots who headed the religious establishments where fairs were held used these occasions to raise revenues, not only from the religious festivities, but also from the market dealings, especially by levying stall fees and frequently also by collecting the commercial taxes. In many cases there was also an indirect benefit from fairs: they promoted the commercial development of the domains of the churches and monasteries and the involvement of peasants in the exchange of goods, which provided opportunities to acquire some money, something on which churches and monasteries were very keen.

This probably also explains why most late Byzantine information about fairs comes from the first half of the fourteenth century, that is, a period when monastic landholding reached its height, while agricultural production experienced a noticeable decline soon after 1340.⁶¹ After the middle of the fourteenth century we hear little more about the many rural fairs of the monasteries of Mount Athos in the hinterland of Thessalonike. By contrast, the urban fairs survived longer. Around 1420 there is evidence for at least three Thessalonian *panegyreis*, at the churches of St. Demetrios, St. Sophia, and Hagioi Angeloi, and possibly another one at the church of the Acheiropoietos.⁶² It is not clear whether the Demetria fair was still held outside the city, as it was in the middle Byzantine period, but the tightening political pressure around the city would suggest it was not. Revenue from the yearly feasts of patron saints and markets no longer appears to have been very substantial, and some of it had to be passed on to the metropolis and the metropolitan officials. In November 1421, however, those entitled to a share of the income came away empty-handed, since the despot Andronikos, lord of the city and in great financial straits, had seized the revenues from the *panegyris* of St. Demetrios.⁶³ That may have been one reason for the estrangement between the metropolitan and the despot on the eve of the city’s handover to the Venetians.⁶⁴ Following old custom, the city administration should in fact have contributed money for holding the city’s most important fair: 200 hyperpyra in peacetime, 100 in wartime. In July 1425, the Senate of Venice, responding to a request by envoys from Thessalonike,

⁵⁹ Lemerle et al., *Actes de Lavra*, 2:275, 282, 305, and elsewhere.

⁶⁰ Bertolotto, “Nuova serie,” app., 544f.

⁶¹ Cf. Laiou, “The Agrarian Economy,” 364ff.

⁶² S. Kugeas, “Notizbuch eines Beamten der Metropolis in Thessaloniki aus dem Anfang des XV. Jahrhunderts,” *BZ* 23 (1914–15): 145f (nos. 27, 29).

⁶³ *Ibid.*, 147 (no. 42).

⁶⁴ D. Balfour, *Politico-Historical Works of Symeon Archbishop of Thessalonica, 1416/17 to 1429* (Vienna, 1979), 56f, 150ff.

announced that it was willing to continue this custom in the city now under Venetian rule.⁶⁵ But the Venetians could not give the city's inhabitants the peace they longed for, with carefree festivities in honor of the city's patron saint and lucrative markets with open city gates. According to the "Threnos" of John Anagnostes, the conquest of Thessalonike by Sultan Murad II in the spring of 1430 also meant the end of the city's *panegyreis*.⁶⁶ To be sure, soon after the beginning of Turkish rule, there were efforts by the clergy and the laity to continue the patron saint festivities at the churches still in Christian hands, and with them no doubt also the fairs. These efforts showed some success, at least until 1453, at the church of St. Paraskeve and possibly even St. Demetrios. Eventually, however, festivities and fairs ceased to be of any importance in the life of the residents of Turkish Selânik and for their commercial activities.⁶⁷ A number of *panegyreis* were newly established in the village hinterland of Thessalonike under Turkish rule, but in places where no fairs are attested in Byzantine times, which shows that these were entirely new developments on a very different basis.

The Peloponnese is probably the only place where the Byzantine tradition of the *panegyreis* was carried on, and not so much by the Byzantines themselves as by the Latins and Venetians.⁶⁸ The general decline of the fairs was caused primarily by the expansion of the Turks, but perhaps also by a progressive weakening of the main Byzantine elements that carried them and took an interest in them. Meanwhile, the people who were the mainstay of Byzantine trade during the final phase of the empire seem to have taken little interest in the traditional fairs.

The Role of the Late Byzantine Merchant in the Emergence of Regional Economic Zones

We have already seen several indications that the year 1204 entailed a change not only in the material but also in the geographic structures of the Byzantine economy. Separate Byzantine economic regions, if and to whatever extent they existed before the Fourth Crusade, were now once and for all a thing of the past. There was no corner of the empire in which the Byzantines were only among themselves. Latin, Slavic, and Turkish soldiers, merchants, conquistadors, and colonizers established themselves, as the champions and executors of foreign political and economic interests, not only at the margins of the empire but also at its centers. They appropriated the economic resources they found and destroyed established economic ties. However, attempts to form a new large imperial realm or reestablish the old one had little success initially.

⁶⁵ Thiriet, *Régestes*, 2:229 (no. 1995); C. Mertzios, Μνημεία της μακεδονικής ιστορίας (Thessalonike, 1947), 57.

⁶⁶ Ioannis Anagnostae *De extremo Thessalonicensi excidio*, 533.

⁶⁷ Sp. Vryonis, Jr., "The Ottoman Conquest of Thessaloniki in 1430," in *Continuity and Change in Late Byzantine and Early Ottoman Society*, ed. A. Bryer and H. Lowry (Birmingham-Washington, D.C., 1986), 318ff.

⁶⁸ Cf. H. Lowry, "Changes in Fifteenth-Century Ottoman Peasant Taxation: The Case Study of Radolifo (Radolibos)," in *Continuity and Change* (as above, note 67), 23–35; S. Faroqi, "The Early History of the Balkan Fairs," *SüdostF* 37 (1978): 50–68.

With Byzantines and Turks as sole rulers on either side of the straits, the region saw a lengthy phase of political pluralism, which favored the development of a new kind of economic regionalism. One result of permanent settlement in this political situation was the formation of specific regional identities and sometimes of regional solidarities that transcended political boundaries. Byzantine economic forces, too, were incorporated into these new identities, as we can see at both the center of the empire and its periphery.

Strictly speaking, the late Byzantine capital itself was already a periphery for long periods. After 1261 the traditional hinterland of Constantinople was only briefly under Byzantine control, and, given the Latin trading bases, that control was far from absolute. The coastal stretches of Asia were almost completely lost to the Turks as early as the first decades of the fourteenth century. From the middle of the fourteenth century, ever larger pieces of the capital's European hinterland were sliced off, and the Byzantines regained small fragments for only brief periods of time. Until the loss of Asia Minor, there is evidence of particularly close trading ties with the city of Nikomedeia, in close proximity to Constantinople, and with Pegai, located a bit farther away on the southern shores of the Sea of Marmara.⁶⁹ The island fortress of Chele on the Black Sea coast of Asia Minor may also have been part of this group, though it is possible that its inhabitants used their boats to take on guard duties for the capital rather than running supplies.⁷⁰ The much more important Black Sea city of Herakleia, meanwhile, may have shifted its focus increasingly to trading links with the east and north and away from the Byzantine capital to the west even earlier than the second half of the fourteenth century.⁷¹

From a long-term perspective, the political loss of Asia Minor was by no means tantamount to the severing of Constantinople's economic ties with the coast of Asia Minor. But there were changes in the topography of trade and commerce: while the gulf of Nikomedeia appears to have lost its traditional importance, various other places on the gulf of Chios moved to the fore, especially Trigleia and Mundania, the latter situated on the site of the old coastal town of Apameia. Surely both towns profited, first of all, from being the closest ports to the first Ottoman capital,⁷² but the shortest route to Constantinople also ran through them. Trigleia was also important as an export port for products from its hinterland. From the second half of the fourteenth century, Genoese merchants exported alum from the nearby pit of Ulubad (*allume de Lupai*) to the west⁷³ and wine from the surrounding vineyards to various locations in the Black Sea

⁶⁹ Cf. Vryonis, *The Decline*, 11f; E. Fenster, *Laudes Constantinopolitanae* (Munich, 1968), 362; Schreiner, "Ein Protagma," 203f.

⁷⁰ Pachymeres, 1:419, 2:233, 619. For a discussion of this and other possible indications of the importance of this site, see P. Diaconu, *Les Coumans au Bas-Danube aux XIe et XIIe siècles* (Bucharest, 1978), 108ff.

⁷¹ Cf. P. Schreiner, *Texte zur spätbyzantinischen Finanz- und Wirtschaftsgeschichte in Handschriften der Biblioteca Vaticana* (Vatican City, 1991), 33ff.

⁷² Cf. Lindgreen, *Clavijos Reise*, 21.

⁷³ M. Balard, *La Romanie génoise: XIII-début du XVIe siècle*, 2 vols. (Rome, 1978), 2:774.

area, either directly or via Pera.⁷⁴ But around 1350 there was also a Greek merchant in Constantinople who offered wine from Trigleia, and he found a Venetian buyer who was staying in Constantinople.⁷⁵ Mundania, on the other hand, was merely a fishing port and a way station to Prousa. During the time of Sultan Murad II, the city's landing site was leased to two Turks from merchant circles, who supervised the local commander and merchants and their dealings with arriving shipmasters and the wares they were transporting.⁷⁶ Around 1440, Greek and Genoese *barcharuoli* and barge captains, carrying trading goods from the Venetian merchant Badoer and his Latin and Greek partners in Constantinople or loading wares from Prousa destined for him,⁷⁷ moored their vessels at this *skala*; Badoer's account book also lists payment of the "chomercio a la Montanea."⁷⁸ In 1445, when the captain of a Burgundian crusading fleet seized a barge with wares belonging to Turks and other "infidels," from the Crusaders' point of view meaning Orthodox Christians, outside of this port, the Genoese of Pera, from whom he had a letter of safe-conduct, forced him to disarm his ship and give up the captured barge by declaring that the goods in question were Genoese, and by hinting that they did not want to jeopardize their relations with the Turks.⁷⁹ Greeks thus appear not only as transporters but also as owners of goods, participants in the exchange of goods across political boundaries that were now cutting across the greater Constantinopolitan region. When it came to securing this commercial activity, they saw eye to eye with the local Turks and Latins and formed a united front against outside interference in a newly created regional balance of power.

Skoutari, located on the coast of Asia Minor directly across from the Byzantine capital and the main Genoese base in the empire, also seems to have become a solid connecting link between Italian, Byzantine, and Turkish merchants and suppliers from the middle of the fourteenth century on.⁸⁰ According to the travel account of the Castilian envoy Clavijo from the beginning of the fifteenth century, Turks daily visited the market in Constantinople and Pera, and those cities "in turn hold a market once a week on Turkish soil, namely in a field by the sea which they call Escotari."⁸¹ The lively commercial dealings between Greeks and Turks at this site were confirmed by the

⁷⁴ Ibid., 844f; C. Mango and I. Ševčenko, "Some Churches and Monasteries on the Southern Shore of the Sea of Marmara," *DOP* 27 (1973): 235f; I. Beldiceanu-Steinherr, "La population non-musulmane de Bithynie," in *The Ottoman Emirate, 1300–1398*, ed. E. Zachariadou (Rethymnon, 1993), 13.

⁷⁵ A. E. Laiou, "Un notaire vénitien à Constantinople: Antonio Bresciano et le commerce international en 1350," in *Les Italiens à Byzance*, ed. M. Balard, A. E. Laiou, and C. Otten-Froux (Paris, 1987), 122.

⁷⁶ N. Beldiceanu, *Les actes des premiers sultans conservés dans les manuscrits turcs de la Bibliothèque Nationale à Paris* (Paris, 1960), 132 (no. 44).

⁷⁷ Badoer, 452, 482.

⁷⁸ Ibid., 123.

⁷⁹ Paviot, "'Croisade' Bourguignonne," 156, 158f (nos. XIII, XV).

⁸⁰ In Byzantine-Turkish relations, Skoutari served initially as the site of political meetings; cf. Kantakouzenos, 3:28 (IV.4).

⁸¹ Lindgreen, *Clavijos Reise*, 38f.

Russian deacon Zosima around 1420.⁸² A short time later, Bertrandon de la Brocquière attests to the existence of a landing site where Turkish customs officials collected transit fees and commercial taxes.⁸³ When this French diplomat crossed from Skoutari to Pera on a Greek ship, he was shocked to discover that the Greek sailors treated him graciously while they were under the impression he was a Turk, but showed open hostility once they had discovered he was a Latin.⁸⁴ But in 1437, the Venetian merchant Badoer made several trips to Skoutari to collect for an Italian business partner assets from business deals in Adrianople,⁸⁵ and he does not report encountering personal problems of any sort. Greek *barcharuoli* in the waters around Constantinople were surely not generally anti-Latin and pro-Turkish; rather, they were also, and perhaps chiefly, concerned to shield a zone of pragmatic cooperation against grand politics, which time and again jeopardized it and put its very existence in doubt.

A similar development is visible on the European shores in the Thracian hinterland of the Byzantine capital. Here, too, the various Turkish advances to hem in the empire's territory and the repeated, unsuccessful attempts to blockade and capture Constantinople outright alternated with periods of relative political calm and economic exchange. In 1438 the Venetian merchant Badoer organized the purchase of wool in the Thracian hinterland from the city of Rhaidestos, which had already been in Turkish hands for some time. He did so not once but several times, in one case extending his lines as far as the city of Quaranta Chiese (Σαράντα Ἐκκλησίαι), which had been under Turkish rule since about 1368 but still had a largely Christian population.⁸⁶ On at least one occasion, his Italian agents and employees put up in the *chonacho* of Rhaidestos, which was inhabited by two Greek buyers. The latter carried out the purchases together with a Greek family (a father and his four sons); on the first occasion the man who transported the goods for them was also a Greek.⁸⁷ This situation thus involved purchases carried out on orders from a Venetian merchant residing in Constantinople, by Italians from the *konak* of a Turkish city, with help from Greek buyers and haulers, in a territory already under complete Turkish control, from what were presumably still largely Greek producers. But evidently the Byzantine city of Herakleia/Perinthos also served as a starting point or way station for these kinds of commercial and purchasing activities by Venetians and Genoese, and we also hear of the small Thracian town of Tzouroullou (Çorlu) in the Byzantine-Turkish border region.⁸⁸

⁸² G. P. Majeska, *Russian Travelers to Constantinople in the Fourteenth and Fifteenth Centuries* (Washington, D.C., 1984), 190–91.

⁸³ Bertrandon de la Brocquière, *Le voyage d'Outremer*, ed. C. Schefer (Paris, 1892), 140.

⁸⁴ *Ibid.*, 148f.

⁸⁵ Badoer, 126.

⁸⁶ Cf. P. Soustal, *Tabula Imperii Byzantini*, vol. 6, *Thrakien* (Vienna, 1991), 420f.

⁸⁷ Badoer, 396, 628.

⁸⁸ This is based on the activities of the Genoese Raffaele Castiglione, a correspondent of Cyriacus of Ancona: W. Bodnar and C. Mitchell, *Cyriacus of Ancona's Journeys in the Propontis* (Philadelphia, 1976), 21ff. On Castiglione, see also F. Babinger, *Aufsätze und Abhandlungen zur Geschichte Südosteuropas und der Levante*, 2 vols. (Munich, 1962–66), 1:131f.

Orders for these kinds of purchases of foodstuffs and raw materials in the larger region of Constantinople came not only from Latins, but also from Byzantines and even from the Byzantine emperor himself. In 1390 the emperor provided a ship to Jane de Draperiis, a Genoese from Pera, so he could load 1,000 modioi of grain for a Venetian in the city of Panidos (at times probably already under Turkish control) and at other Greek and Turkish landing sites, as far away as Abydos, “in quibus solita sunt navigia honerari.”⁸⁹ Purchases were also carried out around 1440 by the imperial city governor Asanes, who bought grain in Panidos (once again in Turkish hands) and had it taken to Constantinople on a Byzantine or Latin ship. As a precaution he took out insurance on the shipment from a Venetian, but the insurer himself took the precaution of exempting possible threats from the Turks.⁹⁰

The leaseholders of the landing sites mentioned by the emperor, even in the Turkish section of the coast, were occasionally Greek *syntrophiai* or commercial associations with Greek participation, as we know from the example of the judge Isidore. In 1453 Isidore and his partners obtained, for the highest bid, among other things the *skala* of Koila/Cilla in the Dardanelles. At Koila he had to hassle with the *kapitanios* and the *skaliatoroi*, who were demanding food supplies from his agents and were harassing the *sandalia* of the *stenitai*, the sailors of the straits, which, according to Isidore's agents, had never happened before.⁹¹ This complaint, along with the restrictions on an insurance guarantee for a Byzantine grain shipment some ten years earlier, indicates the complex problems that existed during the last phase of Byzantium's presence in this economic region, and the many difficulties confronting the last Byzantine merchants and entrepreneurs trying to live and survive in this sphere. The Byzantine capital and the Byzantine economic agents active in the city and its environs did not play the most important role in this regional economic activity. Some things bypassed Constantinople, some remained closed to Byzantine merchants. But it is equally clear that Constantinople continued to be a significant economic force that radiated its influence on the now politically thoroughly transformed area between the two straits, and which also received new economic impulses across the new borders, especially from trade. The surprisingly long survival of Constantinople as a Byzantine city may not have been caused by these impulses, but it was certainly aided by them.

While the late Byzantine capital was pushed into a marginal position early on, the Byzantine province of Morea rose notably in importance and moved into much more central positions than before in the political and economic topography of the empire. The leading commercial forces in the Peloponnese were initially the merchants of Monemvasia; their activities, however, were not merely regional but oriented chiefly toward the entire Romania. This well-protected trading city on the southeastern coast was also traditionally considered the port of the despot's residence of Mistra,⁹² which

⁸⁹ Balard, *La Romanie génoise*, 2:752 n. 84.

⁹⁰ Badoer, 499.

⁹¹ J. Darrouzès, “Lettres de 1453,” *REB* 52 (1964): 87ff (letter 4).

⁹² Cf. E. Kislinger, “Die Sizilienfahrt des Isidoros von Kiev (1429),” *Δίπτυχα* 6 (1994–95): 64f.

was more focused on agriculture and the interior and whose merchants were completely unknown outside the Peloponnese. But already in the early fourteenth century, the two Venetian fleet bases on the southern coast of the peninsula, Korone and Modon, replaced Monemvasia as the most important gateways of the Byzantine interior to the sea. Over time, Korone and Modon also assumed a key economic position for the inhabitants of the Byzantine administrative center in the Peloponnese. The most important products of the peninsula were exported through these two cities: grain, meat, (olive) oil, cotton, and especially raw silk⁹³ as well as some quantity of artisanal products, such as silk cloth, “panni di seta di Morea.”⁹⁴ The goods took a number of routes. The most important one went via the port of Kalamata and the Langada pass, though perhaps there was also a route across the Mani from Oitylon to Karyoupolis and Gytheion, and from there to Mistra.⁹⁵ Goods were supplied chiefly by landowners of the Morea and by the despots of the imperial house of the Palaiologoi.⁹⁶ But professional merchants from Mistra and other places of the despotate were also involved, and the Venetians in this economic sphere took a greater interest in the presence of foreign merchants at their markets than in the presence of their merchants at foreign markets.⁹⁷ Already in the early fourteenth century, high-ranking Byzantine officials did financial business with merchants and bankers in Korone and Modon who were of Greek background and had Venetian citizenship.⁹⁸ In the early fifteenth century, notables from the same circles deposited their valuables and funds in banks: after 1418, at the latest, the *zentillomo* (Michael or Paul) Sophianos did so,⁹⁹ in 1429 the *megasdux* and former *protostrator* Manuel Phrangopoulos,¹⁰⁰ and after 1437/38 the *protostrator* George Eudaimonoioannes, son of the widely traveled diplomat Nicholas Eudaimonoioannes from Mistra, who had deposited his valuables with the bank of one Luca di Verona.¹⁰¹

It is unclear whether these deposits also formed the basis for mercantile and finan-

⁹³ I. P. Medvedev, *Mistra* (Leningrad, 1973), 87ff.

⁹⁴ *Acta et diplomata Ragusina*, ed. J. Radonić, 2 vols. (Belgrade, 1934–35), 1:836 (no. 398). On the regional products of Morea and the close ties of its economy to the Venetian economic system, see Laiou, “The Agrarian Economy,” 322ff.

⁹⁵ Cyriacus of Ancona used this route in 1437; cf. D. M. Nicol, *The Immortal Emperor* (Cambridge, 1992), 34.

⁹⁶ N. Jorga, “Notes et extraits pour servir à l’histoire des Croisades au XVe siècle (fin),” *ROL* 8 (1900–1901): 69; Thiriet, *Régestes*, 3:160 (no. 2835).

⁹⁷ Cf. Matschke, *Die Schlacht bei Ankara*, 228f.

⁹⁸ The loan that Andronikos Asanes took out prior to 1332 (or 1324) from a certain Simonis Cormulissi through his agent George Magulas (Thomas and Predelli, *Diplomatarium*, 1:202, 231) seems to have been made while he was governor of the Byzantine Peloponnese; although Cormulissi/Kurmulises was a Venetian subject, he owned property in Korone or Modon (cf. G. Giomo, “Registro dei Misti del Senato della Repubblica Veneta,” *Archivio Veneto* 18.1 [1879]: 107), and his family of Greek background is attested in the Venetian territory for several more generations and crossed in a variety of ways the paths of Byzantine lords and subjects in the Peloponnese.

⁹⁹ Sathas, *Documents inédits*, 3:178 (no. 731).

¹⁰⁰ *Ibid.*, 350f (no. 937); cf. *PLP* 12:151f (no. 30139).

¹⁰¹ N. Jorga, “Notes,” *ROL* 6 (1898): 390f; Thiriet, *Régestes*, 3:160 (no. 2835).

cial business by the aristocracy.¹⁰² We do know that Byzantine merchants from Mistra were, from the early fifteenth century on, included in normal credit transactions and advance purchases with Venetian partners. The Byzantine authorities disapproved of these practices, which they could not control and considered immoral, and demanded a return to the commercial practices from the time of the first despots of the Morea. However, they were told that it was in the very nature of money to be loaned out for commercial activities.¹⁰³

The diversified mercantile and economic links between the center of the Byzantine Peloponnese and the most important Venetian colonies on the peninsula were so stable that they weathered and outlasted also the more or less continuous political strain on Byzantine-Venetian relations in the south of the empire. Perhaps the city of Monemvasia, more strongly tied to the despotate by a new grant of privileges at the end of the fourteenth century, and the cities of Clarenza and Patras, absorbed into the Byzantine sphere by military action in the early fifteenth century, acquired greater significance for the internal trade of this economic region and brought Mistra more independence and greater commercial diversity. Still, their strong ties to Korone and Modon were preserved and probably even grew in importance. In any case, it appears that various entrepreneurs who were later prominent in the capital during the transition to Turkish rule took their first steps in the zone of contact between the Venetian colonies and the Byzantine despots' residence.¹⁰⁴ Perhaps the region in and around Mistra witnessed the incorporation of peasant elements into mercantile activities, similar to the process one can observe already since the fourteenth century in the district of Korone and Modon.¹⁰⁵

Byzantine merchants, suppliers, and buyers were also involved in the creation of other economic regions in the empire. Though these processes did not originate primarily with the Byzantines and the concrete form they took was not influenced chiefly by them, they were significant for the development of late Byzantine trade and for late Byzantine merchants. The native economic elements were forced into a mobility that was for them quite novel and unaccustomed. To them, strange lands sometimes began right outside their own door, and competition already took place on the smallest scale. At the same time, the proximity of the competition tended to reveal the secrets of its success, and it promoted the emergence of shared norms and the pursuit of common interests. The economic regions, those described in detail and those I have only mentioned in passing, thus became the setting in which changed forms of Byzantine trade and new kinds of Byzantine merchants emerged and experimented. Though the re-

¹⁰² In 1419, Nicholas Eudaimonoioannes appears as an importer of wood from Crete for the construction of a church (in Mistra?): Thiriet, *Régestes*, 2:174 (no. 1734). However, we have no idea if he also exported goods and, if so, what.

¹⁰³ Sathas, *Documents inédits*, 3:367 (no. 953).

¹⁰⁴ Cf. K.-P. Matschke, "Zum Anteil der Byzantiner an der Bergbauentwicklung und an den Bergbauerträgen Südosteuropas im 14. und 15. Jahrhundert," *BZ* 84/85 (1991–92): 67ff.

¹⁰⁵ Cf. C. Hodgetts, "Venetian Officials and Greek Peasantry in the Fourteenth Century," in *Kathegtria: Essays Presented to Joan Hussey for Her 80th Birthday* (Camberley, 1988), 488f.

sults of this learning process varied and instances of success were anything but numerous, they cannot be disregarded.

*Late Byzantine Long-Distance Trade and Its Place in the
Late Medieval Mediterranean Trade System*

Late Byzantine long-distance trade was more strongly influenced than any other form of commercial activity by foreign economic powers and overarching economic developments. The Fourth Crusade had displaced Byzantine long-distance traders from the center of the empire to the periphery and from the coast to the interior. The reconquest of Constantinople in 1261 changed this ominous situation only in part, since it reduced only the political and not the economic pressure of the West on Byzantium. Moreover, the collapse of the crusading states in the Near East shortly thereafter caused the northern Italian seafaring republics of Venice and Genoa to focus even more strongly than before on the empire, trying to make this region the center of further economic expansion and the chief connecting link between the western and eastern termini of their intercontinental trading network. The Genoese used the treaty of Nymphaion to engage in an unprecedented sweep through the northern Romania and secured, in a few short decades, commercial dominance in the entire Black Sea region. The Venetians, having temporarily become *personae non gratae* in Constantinople, were able to keep and even tighten their grip on the economic control of the southern part of the Romania by undertaking a long-term effort to expand and strengthen their unsinkable flagship, Crete. The negative repercussions for Byzantine long-distance traders were obvious. From the end of the thirteenth century, their forces, already fractured by the separation of Trebizond from Constantinople, were systematically pushed out of Black Sea shipping and trade by the Genoese, their footholds in the Crimea and the Danube delta were decimated, and their commercial activities were strictly regulated. Eventually this policy culminated in the attempt by the Genoese in the mid-fourteenth century to gain complete control over access to the Black Sea by closing off the Bosphoros at the fortress of Hieron. Byzantine resistance to the closing of important seaborne trading routes and the obstruction of trading voyages was presumably stronger and more effective in the Aegean region, though the progressive loss of Byzantine naval bases in and around Rhodes, from Anaia to Ephesos, was bound to have lasting negative repercussions. Moreover, the seizure of Byzantine merchants and their wares by Venetian authorities in Cretan ports, which amounted to a de facto temporary closure of these ports to Byzantine ships, further weakened the already fragile Byzantine commercial ties to the Near East, Egypt, and Cyprus. Beginning in the fourteenth century, regional economic zones in which Byzantine commercial interests were initially not involved at all, or only marginally so, developed in both the central and eastern Black Sea region and the southern Aegean.

Even during this period the Byzantines were not completely cut off from the trading routes in the eastern Mediterranean or confined to small economic areas isolated from each other. For example, shortly after 1300, the Genoese entrepreneur Rainerio Bocca-

negra used his ship to transport a number of different Byzantine merchants and their wares from Alexandria to Pera/Constantinople, and the only reason he got into a quarrel with them was because they were unwilling or unable to pay the freight charges of 500 hyperpyra. In response, the captain, “sic ut mos est,” confiscated as many wares for selling as were needed to pay for the *navium*.¹⁰⁶ In 1310 the *dux* of Crete received the imperial envoy John Agapetos, who not only took care of official matters but evidently also engaged in private business activities, for which he used a *salvum conductum*, which was even to be renewed on orders from the central Venetian authorities.¹⁰⁷ The first more detailed report of commercial or financial activities by Byzantine subjects from the capital of Constantinople dates only from the early 1340s,¹⁰⁸ but the aristocratic family (*archontes*) of the Xanthopoulos-Sideriotes was surely not the first.¹⁰⁹ Under the first Palaiologan emperors, Monemvasiot trading vessels, warships, and privateer ships with Monemvasiot captains at the helm and with Monemvasiot merchants and merchandise are attested throughout the entire eastern Mediterranean region, in the Venetian ports of Crete, in Korone, Modon, and Nauplion in the Peloponnese, in the Cyclades, in the waters around Negroponte, at the naval base of Anaia, and in the waters of Acre. As early as around 1290, they also appear as buyers in Kaffa, a Genoese center in the Crimea, where they even leased a ship for a trading journey to Kuban, Batumi, and Trebizond. They had military and diplomatic contacts with Venetians, Genoese, and Catalans, but they also concluded commercial deals with the Italians, transported wares of merchants from the Italian colonies and their mother cities, sailed as traders on Venetian ships, rented Genoese ships together with Greek subjects of the Venetians, and leased ships to the Catalans. Thus they not only found access to various newly emerging trade regions, but were economically, and especially commercially, active in the entire Romania and even beyond its borders.¹¹⁰ Native ships with native merchants and a variety of native products are attested between Thessalonike and Constantinople and between various Black Sea ports, independent of the Italians and with no connections to them. Their presence reveals that one cannot speak of a true monopoly of Genoese and Venetians on either side of the straits.¹¹¹

Nevertheless, after 1350, there were certain changes in the relationship between Byzantine and Italian merchants in the Romania, and these changes were, at least in

¹⁰⁶ Bertolotto, “Nuova serie,” 521; on Boccanegra, see Balard, *La Romanie génoise*, 2:756.

¹⁰⁷ F. Thiriet, *Délibérations des assemblées vénitiennes concernant la Romanie*, 2 vols. (Paris–The Hague, 1966–71), 1:135 (no. 216). He could be the priest of the same name who undertook a journey by ship around 1316; *Das Register des Patriarchats von Konstantinopel*, ed. H. Hunger et al., 2 vols (Vienna, 1981–95), 1:320 (no. 47), cf. *PLP* 1: 10 (no. 121).

¹⁰⁸ K.-P. Matschke, “Byzantinische Politiker und byzantinische Kaufleute im Ringen um die Beteiligung am Schwarzmeerhandel in der Mitte des 14. Jahrhunderts,” *Mitteilungen des Bulgarischen Forschungsinstituts in Österreich* 2.6 (1984): 76ff.

¹⁰⁹ Cf. A. E. Laiou, “Byzantium and the Black Sea, 13th–15th Centuries: Trade and the Native Populations of the Black Sea Area,” in *Bulgaria Pontica II* (Sofia, 1988), 174.

¹¹⁰ On these activities, see H. A. Kalligas, *Byzantine Monemvasia: The Sources* (Monemvasia, 1990), *passim*.

¹¹¹ Cf. G. Makris, *Studien zur spätbyzantinischen Schifffahrt* (Genoa, 1988), 225ff; Laiou, “Byzantium and the Black Sea,” 168ff.

part, the result of changes on the larger political stage. The final occupation of the entire northwestern coastal zone of Asia Minor by the Turks and their first successful advances across the straits to Europe quickly dashed western commercial dreams of a stable and effective control of the Dardanelles and the Bosphoros. Over the long term, the de facto end of the *Pax Mongolica* in Central Asia and the political instability within the successor states to the Golden Horde, a result of the rivalry among them, reduced the significance of the Black Sea region as the connecting link of intercontinental commercial expansion by the Italians and returned the Levantine region of the Mediterranean to greater prominence. As already noted, the regionalization of western trade in the Romania encouraged a gradual dismantling of the barriers between native and foreign merchants, promoted the gradual abandonment of rigid restrictions on Byzantine commercial activity, and enabled Byzantine merchants to emerge slowly from voluntary and enforced isolation and move more resolutely out of traditional and newly created niches.

This change is manifested for the first time in the business contracts drafted by the Genoese notary Antonio di Ponzò during his sojourn in the Genoese trading base of Kilia in the Danube delta in 1360/61. They reveal a world of trade that was very tightly interwoven and functioned in very complex ways. This world was home not only to Genoese and other western merchants, but also to Armenians, "Saracens," and especially Greeks. A significant number of the latter still came from the Byzantine Empire, chiefly from Constantinople, but also from Ainos and Adrianople, cities soon lost to the Latins and Turks, and from Mesembria, which would soon return to the fold of the empire.

Of the fifty-seven ships listed in the Ponzò registers, seventeen (i.e., almost a third) belonged wholly or at least in part to Greek shipowners and patrons.¹¹² Among them were Theodore Manasi (Manasses) and Tryphon Sinetos (Sinaites?) with his *naukleros* and ship clerk who also hailed from Constantinople.¹¹³ There was even a monk by the name of Josaphat Tovassilico (Basilikos) from the capital's Athanasios monastery, behind whom was perhaps the Xerolophos monastery itself as the owner of the ship.¹¹⁴ The shipowner Theodore Piro (Pyrrhos) from Constantinople and his partner Ianinos, who was from Trebizond but lived in Constantinople, took out a loan from a certain Ianinus Surianus, also a resident of Constantinople.¹¹⁵ Surianus may be identical with a certain Canninus, "filius quondam Georgii Suriani," attested in Dubrovnik in 1354 as the seller of a small ship. He lived in the capital "ad logeram Venetiarum,"¹¹⁶ which means he might have been a Levantine protégé of the Venetians and as such loaded one of his ships in 1354 with supplies for Emperor John Kantakouzenos. However,

¹¹² M. Balard, "L'activité économique des ports du Bas-Danube au XIV^e siècle," *TM* 8 (1981): 40.

¹¹³ M. Balard, *Gênes et l'outre-mer*, vol. 2, *Actes de Kilia du notaire Antonio di Ponzò, 1360* (Paris, 1980), 150 (no. 89).

¹¹⁴ G. Pistarino, *Notai genovesi in Oltremare: Atti rogati a Chilia di Antonio di Ponzò, 1360–61* (Genoa, 1971), nos. 72, 80, 86; cf. Oikonomides, *Hommes d'affaires*, 75; Makris, *Studien*, 268f.

¹¹⁵ Balard, *Gênes et l'outre-mer*, 2:138f, 141f (nos. 80, 82).

¹¹⁶ B. Krekić, *Dubrovnik (Raguse) et le Levant du Moyen Age* (Paris–The Hague, 1961), 197 (no. 204).

shortly after setting sail he was intercepted by Genoese ships and plundered because Venetian trading goods were found aboard.¹¹⁷ The Greek shipowner Costanzo Mamali (Mamalis/es) was in the Danube delta on at least two occasions between September 1360 and April 1361: in the fall he concluded a contract for the advance purchase of grain, which, according to the terms of the contract, had to be delivered by the following 15 April in Kilia; at the end of April 1361, he took out a loan from two Greeks through a Genoese agent to pay for grain that was stored in a local granary and was to be taken to Constantinople by boat.¹¹⁸ Perhaps it was in addition to the grain already ordered half a year earlier, but perhaps it was unrelated to that earlier transaction.

It appears that Theodore Agalo (Agallon) from Constantinople was not only interested in buying goods in Kilia, but had himself transported Greek wine from the south to the mouth of the Danube. The wine was waiting to be sold in a local warehouse, and in the meantime Agalo used it as security for a loan to finance the return cargo.¹¹⁹ The two Greek investors Jane Francopulo (Phrangopulos) and Jane Fassilico (Basilikos) from Adrianople acted only in tandem, which means their association was probably based on a *syntrophia*. They had nearly 2,000 hyperpyra at their disposal, which they loaned out in various amounts primarily to Greek merchants and captains, and collected with profits in Constantinople or Pera.¹²⁰ The Greeks Michael Monenos and Leo Roy (Ῥαῖς, Ράϊος?) from Constantinople are mentioned in the Ponzò registers only because they used a Genoese procurator to collect from a debtor who was staying in Kilia, evidently also a Genoese.¹²¹

The named and unnamed Greeks showed that they were very familiar with the business practices in the Black Sea colony. They were completely integrated into the prevailing practices, concluded contracts of advance purchase, used Latin procurators, and formed joint associations with them. Not all of them still needed interpreters in their business negotiations, and at least some of them were professional seamen and merchants. One of their ships sailed under the Genoese flag on its return trip to Constantinople,¹²² because it was safer that way and pragmatism stood above politics.

As of now there is no Byzantine primary source that offers a direct look at this surprising development from a Byzantine perspective and that would allow us to verify the degree of commercial involvement reflected especially in the Ponzò registers. A weak, but not entirely useless, substitute are the records of the patriarchal court of Constantinople. At the turn of the fifteenth century, in a period of severe crisis for the power of the Byzantine state and its legal authority, Byzantine business circles appealed to the court to settle internal disputes, and its decisions therefore provide some insight into normal business and commercial life. What we see is that even during a period when they were completely encircled by the Turks and cut off from the outside world,

¹¹⁷ *Monumenta spectantia historiam Slavorum Meridionalium* (Zagreb, 1872), 3:265f (no. 4009).

¹¹⁸ Balard, *Gênes et l'outre-mer*, 2:128f (nos. 74, 75); Pistarino, *Notai genovesi*, 79ff (nos. 47, 48).

¹¹⁹ Pistarino, *Notai genovesi*, 170f (no. 94).

¹²⁰ *Ibid.*, 79ff (nos. 47, 48, 58, 59, 66, 67, 71, 83, 89, 90); cf. Oikonomides, *Hommes d'affaires*, 65f.

¹²¹ Pistarino, *Notai genovesi*, 129 (no. 73).

¹²² Balard, *Gênes et l'outre-mer*, 2:69 (no. 30).

late Byzantine businessmen of Constantinople developed notable activities and sought commercial contacts in various directions and with various partners.¹²³

The complaint of Andreas Argyropoulos against Theodore Mamalis points to continuing trade links of Byzantine commercial circles to the lower Danube region. Mamalis had sold squirrel furs from Wallachia on his own account for 587 hyperpyra. Evidently he was not entitled to do so, since the furs had been warehoused with the defendant's brother, now deceased, as a deposit from the plaintiff. The basis of the disagreement was a *syntrophia*, the concrete nature of which Argyropoulos was unable to prove to the court since the witnesses to a contract with Mamalis were not in Constantinople and could not be summoned because the city was under siege.¹²⁴ The activities of the Argyropoulos family on the lower Danube around the turn of the century are also attested in other sources.¹²⁵ If there is a connection between the Mamalis brothers and Mamalis, who appears in the Ponzò registers in 1361, one traditional avenue of commercial activity in late Byzantium would be substantiated also in terms of the people involved.

Clearer still are the commercial feelers that were extended into the southern Black Sea region during the siege of Constantinople, which lasted several years. They came specifically from the Goudeles family; around the turn of the century, several of its members were sailing to the cities of Sinope, Amisos, and even to Trebizond and beyond, with trading goods and assistants. They were able to do this, however, thanks only to a *syntrophia* and other business arrangements with the Greek Koreses family from the island of Chios, which by this time had also gained a foothold in the Genoese suburb of Pera. The Koreses channeled the commercial shipments of their business partners through this freely accessible port, something the latter could not do themselves because of certain disagreements with the authorities in Pera.¹²⁶ Links to the Crimea are documented in the patriarchal register only in the person of Constantine Pegonites, who returned penniless to the besieged capital from a trip to Symbolon.¹²⁷ In reality, trade relations with the Crimea were much livelier around 1400, and, as other sources attest, they encompassed above all its main city of Caffa.¹²⁸ There even seem to have been certain lines of commerce that reached the Rus during those years, but at this point we are unable to trace them in any detail.¹²⁹

¹²³ Cf. D. Bernicolas-Hatzopoulos, "The First Siege of Constantinople by the Ottomans (1394–1402) and Its Repercussions on the Civilian Population of the City," *ByzSt* 10 (1983): 39–40; N. Necipoğlu, "Economic Conditions in Constantinople during the Siege of Bayezid I (1394–1402)," in *Constantinople and Its Hinterland* (as above, note 39), 157–67.

¹²⁴ MM 2:374f.

¹²⁵ Cf. K.-P. Matschke, "Bemerkungen zu den sozialen Trägern des spätbyzantinischen Seehandels," *Byzantinobulgarica* 7 (1981): 256.

¹²⁶ MM 2:546–50.

¹²⁷ MM 2:386; cf. *PLP* 10:14f (no. 23154).

¹²⁸ Cf. P. Schreiner, "Bizantini e Genovesi a Caffa: Osservazioni a proposito di un documento latino in un manoscritto greco," *Mitteilungen des Bulgarischen Forschungsinstituts in Österreich* 2.6 (1984): 97–100; Balard, *La Romanie génoise*, 1:338, 398.

¹²⁹ Cf. MM 2:385.

What we can trace much more concretely are Byzantine trading links from Constantinople “down the sea” to the Genoese colony of Chios. In 1401 a certain Euphemianos and John Sophianos signed a contract with Constantine Angelos, who agreed to go to Chios on the ship of the Temunelia with money or goods from his partners. The ship probably belonged to Nicolò de Moneglia, who, along with various other Genoese captains, was involved in the lucrative grain deals that the *massarii* of Pera, Ettore Fieschi and Ottobuono Guistiniani, had concluded with the Byzantine emperor during the siege of his capital.¹³⁰ Since Angelos had not used this ship, however, and had been shipwrecked sailing with someone else, Euphemianos went to court to demand the return of his money, though without success. Sophianos, meanwhile, had withdrawn his money from the joint enterprise just in time.¹³¹

Someone who was successfully involved in the dubious grain dealings was John Gudeles, who already had business connections with the Koreses of Chios and who, like de Moneglia, now teamed up with the financial officials in Pera to bring grain from Chios to Constantinople. He probably even took some of it on a ship with a double deck that he owned together with a Genoese from the Spinola family. In Constantinople he then sold the grain at the inflated price of 31 hyperpyra per modios.¹³² While the siege of the capital brought impoverishment and hunger to the mass of its inhabitants, and for some even death, a small group of merchants, ship captains, and colonial officials, which also included some Greeks, grew rich by showing great initiative and few scruples. What was true for these grain dealers was also true for a few late Byzantine merchants and bankers who found access to the international financial consortium that, after 1396, worked to ransom the noble prisoners of Nikopolis from Turkish captivity.¹³³ Once again the Byzantines were junior partners of the Italian entrepreneurs, but the scale of their commercial and financial activities had evidently expanded considerably compared to what it had been in the 1360s.

The account book of the Venetian Giacomo Badoer, compiled in Constantinople between 1436 and 1440, reveals that the merchant who stayed put in one place and directed his wares and money into various enterprises played a notable role in late Byzantine economic life alongside the merchant who traveled and took risks. Badoer's Byzantine business partners had particularly strong ties to the Venetian and Greek commercial circles on the island of Crete, but the contacts of some Byzantine merchants and financiers extended even farther than that. A *chir* Todaro Ralli had solid commercial contacts with Sicily.¹³⁴ He may have been identical with the envoy Theodore Rales, sent by the emperor to seek foreign aid. He and his father Constantine had stopped off at the royal courts of France and Aragon during the first decades of

¹³⁰ Balard, *La Romanie génoise*, 1:393; 2:732, 736, 740, 783.

¹³¹ MM 2:560f.

¹³² Cf. Matschke, *Die Schlacht bei Ankara*, 131.

¹³³ Ibid., 179f. K.-P. Matschke, “The Notaras Family and Its Italian Connections,” *DOP* 49 (1995): 63.

¹³⁴ Badoer, 262f; cf. S. Fassoulakis, *The Byzantine Family of Raoul-Ral(l)es* (Athens, 1973), 67 (no. 54).

the fifteenth century.¹³⁵ A *miser* Manoli Jagari, who probably accompanied Emperor John VIII on his journey to Venice as early as 1424 and had acted as a witness for a loan,¹³⁶ was, according to the Badoer accounts, involved in an exchange transaction between Constantinople and Venice.¹³⁷ A puzzling case is a certain Chogia Ise. Despite being called “turcho,” he seems to have come from a Byzantine aristocratic family that, in the early fourteenth century for reasons not entirely clear, relocated to Kaffa and Surgat on the Crimea. There the family was strongly orientalized and became quite wealthy, eventually returning to Constantinople shortly before the end of the empire.¹³⁸

It is not only the case of Chogia Ise that shows that the Byzantine capital was, right to the end, an attractive place for wide-ranging business activity, and that Byzantine social circles even in the last days were by no means left to their own devices. They were not simply decimated by streams of emigrants to the Latin colonies and the Latin West; rather, they were also continually reinforced, materially and in terms of personnel, by immigration from every part of the Romania.

Merchants from other late Byzantine cities could hardly compete with the range and volume of Constantinople's commerce, but no small number of them also extended their reach beyond the immediate confines of their native towns. Of course that applies especially to Thessalonike. Ship captains and merchants from the empire's second largest city are attested in the trade region of Crete and the Peloponnese around the middle of the fourteenth century and during the period of Venetian rule between 1423 and 1430.¹³⁹ There is good evidence to suggest that merchants from Thessalonike were active in the first half of the fourteenth century also in western Asia Minor, in the area of Chios, Phokaia, and all the way to Philadelphia.¹⁴⁰ Regular sea traffic existed between Thessalonike and Constantinople during long stretches of the late Byzantine period, no small part of which was commercial traffic.¹⁴¹ It is now also becoming clearer that Thessalonikan trading interests also extended into the Black Sea region. In 1350 we hear of a certain Michael Sofachi (?) (Sofakes?) from the Macedonian metropolis, who resided in Constantinople and in Tana took on a load of lard that a Venetian businessman had ordered from a local butcher.¹⁴² This is the same period when the two Agapetos brothers, along with other merchants from the Byzantine capital, were regularly active at the mouth of the Don.¹⁴³ Sofachi may have belonged to the group

¹³⁵ A. Rubió i Lluch, *Diplomatari de l'Orient Català, 1301–1409* (Barcelona, 1947), 702ff; *Ordonnances des rois de France* (Paris, 1755), 9:148f.

¹³⁶ N. Jorga, *Notes et extraits pour servir à l'histoire des croisades au XV^e siècle*, 2 vols. (Paris, 1899), 1:354.

¹³⁷ Badoer, 784.

¹³⁸ *Ibid.*, 382; cf. K.-P. Matschke, “Das Chogia-Ise Puzzle,” paper presented at the symposium “Bulgarica Pontica Medii Aevi VI,” Nessebar, 1995.

¹³⁹ C. Gasparis, “Ἡ ναυτιλιακή κίνηση ἀπὸ τὴν Κρήτη πρὸς τὴν Πελοπόννησο κατὰ τὸν 14ο αἰῶνα,” *Τὰ Ἱστορικά* 9 (1988): 300; Thiriet, *Délibérations*, 2:156 (no. 1299).

¹⁴⁰ Cf. Kantakouzenos, 2:384 (III.63).

¹⁴¹ However, the only ship captain known to us by name who plied the route with trading goods dates only from the time when Thessalonike was already Turkish: Badoer, 650, 653.

¹⁴² Laiou, “Un notaire vénitien,” 103.

¹⁴³ MM 2:363ff (no. 162), and 358f; cf. Matschke, “Byzantinische Politiker,” 83f.

of Byzantine merchants who tried to establish independent economic footholds in the northern region of the Black Sea around the middle of the century. They had some success, despite coercive measures on the part of the Genoese, which culminated in the prohibition against entering the Sea of Azov.¹⁴⁴

Around 1420, a resident of Thessalonike, *kyr* Michael (Metriotes), journeyed to Tana,¹⁴⁵ most likely for business reasons. He may have taken the trip without stopping at a way station or landing site in Constantinople, possibly even aboard one of the Venetian convoys that occasionally stopped over in Thessalonike on their regular trips to the Black Sea around this time.¹⁴⁶ The merchants of Thessalonike did not look only toward the south and east, but also toward the north and west. In the year 1424, Theodore Catharo, a "civis civitatis Salonichi," was staying in the trading center of Dubrovnik on the Adriatic Sea as an agent of one Johanne Russotas, also from Thessalonike, in order to pursue a legal quarrel with the local Radosalić family. He declared on this occasion that he had, some time before in Venice, handed over goods and cash of considerable value to one member of this family.¹⁴⁷ The same Katharos must also have been active on business in the Serbian mountain town of Novo Brdo, where his employer Russotas had extensive economic interests in mining and held important functions in the mining administration.¹⁴⁸

The activities of late Byzantine merchants from the other cities of the empire are much more poorly documented. Most of the merchants and captains from Ainos known to us by name date from the period when the city was already in the hands of the Genoese Gattilusi family,¹⁴⁹ though it is likely that their predecessors had commercial ties to Thessalonike, Constantinople, Crete, and to other regions of the Romania. Only faint traces are discernible of the commercial contacts of the inland city of Philadelphia, which was surrounded and cut off by the Turks from the early fourteenth century. To reach the Aegean, travelers from Philadelphia had to go to Sardis and from there either to Phokaia via Magnesia or to Smyrna via Nymphaion. Shortly after 1300, George Zacharias, who was surely a merchant, continued his journey from Smyrna via Mytilene (on Lesbos) to Thessalonike.¹⁵⁰ A short time later, merchants from Philadelphia, whose destination is unknown to us, put up in a hostel (*xenodocheion*) in Selymbria.¹⁵¹ On a visit to the capital in 1320, Metropolitan Theoleptos of Philadelphia spoke

¹⁴⁴ E. Ricotti, *Liber Iurium Reipublicae genuensis*, 2 vols. (Turin, 1854–57), 2:603 (no. 203).

¹⁴⁵ Kugeas, "Notizbuch," 153; cf. Laiou, "Byzantium and the Black Sea," 179.

¹⁴⁶ Cf. Jorga, *Notes et extraits*, 2:437.

¹⁴⁷ Krekić, *Dubrovnik*, 275ff.

¹⁴⁸ Cf. Matschke, "Zum Anteil," 60f.

¹⁴⁹ Cf. G. T. Dennis, "Three Reports from Crete on the Situation in Romania, 1401–1402," *StVen* 12 (1970): 246ff; Badoer, 416; cf. F. Thiriet, *Duca di Candia: Ducali e lettere ricevute* (Venice, 1978), 62f; cf. the information in Balard, *Gênes et l'outre-mer*, 2:183f, 186f (nos. 115, 117).

¹⁵⁰ P. Schreiner, "Eine venezianische Kolonie in Philadelphiea (Lydien)," *Quellen und Forschungen aus italienischen Archiven und Bibliotheken* 57 (1977): 343.

¹⁵¹ H. Ahrweiler, "Le récit du voyage d'Oinaïôtes de Constantinople à Ganos," in *Geschichte und Kultur*, ed. Seibt (as above, note 9), 23ff.

of many people from his city who traveled to Constantinople despite the great dangers along the way.¹⁵² It is quite possible that among them were the merchants whom the writer George Oinaiotēs encountered only a day's journey from the capital.

The commercial contacts of Monemvasia declined noticeably after the mid-fourteenth century, but that did not mean that the commercial activities of its residents waned. For reasons that are not entirely clear, various families of entrepreneurs or their highly energetic agents seem to have gradually left the city from the mid-fourteenth century in search of new fields of commercial and political activity in Venetian colonies and especially in the Byzantine capital. Hardly any traces at all can be found of the commercial activities of the inhabitants of Ioannina. In 1319 they had received a comprehensive trading privilege for the entire empire, much like that given to the Monemvasiots. However, they hardly seem to have taken advantage of their commercial advantages, since their economic interests were entirely directed toward the western coast of the Adriatic.¹⁵³

Toward the end of the thirteenth century, even before the complete collapse of the Crusader states, the new Palaiologan emperors and Mamluk rulers negotiated new treaties for their traditional commercial relations.¹⁵⁴ During the century that followed, as well, these relations were never completely severed.¹⁵⁵ In fact, in the 1380s, the Byzantine government even appears to have attempted to improve the Byzantine terms of trade in the markets of Egypt and Syria. In 1383 a delegation from Emperor John V petitioned Sultan Barquq for permission to establish their own consulate in Alexandria and for the concession of the same trading privileges that the "Franks" enjoyed in that Egyptian port city.¹⁵⁶ There are some faint indications that the Byzantines got more than merely the sultan's formal assent. For instance, a Greek vice-consul of the Venetians is attested in the port city of Damietta in the early fifteenth century, and there are speculations that this might have been an honorary consul,¹⁵⁷ in which case it is

¹⁵² A. C. Hero, "The Unpublished Letters of Theoleptos, Metropolitan of Philadelphia (1283–1322)," *Journal of Modern Hellenism* 3 (1986): 24.

¹⁵³ Trading links existed, especially to Venice and Dubrovnik; the commercial goods were chiefly grain: Thiriet, *Régestes*, 3:115 (no. 2659); Krekić, *Dubrovnik*, 275, 305f (nos. 683, 652). Two merchants from the city from around 1330 are known by name: Thomas and Predelli, *Diplomatarium*, 1:232f (no. 118), though we do not know anything about trading activity outside their own city, including the Adriatic region.

¹⁵⁴ Cf. M. Canard, "Un traité entre Byzance et l'Égypte au XIII^e siècle et les relations de Michel Paléologue avec les sultans mamluks Baibars et Qalā'un," in *Mélanges Gauthier de Demombynes* (Cairo, 1937), 197–224.

¹⁵⁵ Cf. Theodore Metochites, *vita* of St. Michael, *AASS*, Nov. 4:669–78; A. E. Laiou, "The Greek Merchant of the Palaeologan Period: A Collective Portrait," *Πρακτικά τῆς Ἀκαδημίας Ἀθηνῶν* 57 (1982): 102; P. Schreiner, "Byzanz und die Mamluken in der 2. Hälfte des 14. Jh.," *Der Islam* 56 (1979): 296–304; W. Krebs, "Innen- und Außenpolitik Ägyptens, 741–784/1341–1382" (dissertation, University of Hamburg, 1980).

¹⁵⁶ S. Y. Labib, *Handelsgeschichte Ägyptens im Spätmittelalter, 1171–1517* (Wiesbaden, 1965), 343; E. Ashtor, *Levant Trade in the Later Middle Ages* (Princeton, N.J., 1983), 105.

¹⁵⁷ *Ibid.*, 555.

possible that his chief task was to represent Byzantine interests. In 1411 Emperor Manuel II sent letters and presents to Sultan Farağ in an effort to continue the good relations between the two states. The man who delivered them was the Greek merchant Surmuš ar-Rumi, who (regularly?) traveled on business between Egypt and Byzantium,¹⁵⁸ and whose Greek name could have been Zomas. Still, whatever trade there was could not have been very substantial either in terms of goods or the number of people involved, as we learn from a report by Ghillebert de Lannoy in 1437: we are told that no merchants were found in the *couchiers* of Ancona, Naples, Marseilles, Palermo, and Constantinople, quite in contrast to the busy commercial life in the *fontèques* of the Venetians, Genoese, and Catalans.¹⁵⁹

Now and then the Byzantines even managed to bypass the trading barrier that the Genoese and especially the Venetians had erected to close off the west beyond the Aegean Sea. I have already mentioned the occasional appearance of Byzantines in Adriatic ports, in Dubrovnik, Ancona, and Venice. But that was not all: there is evidence of a small colony of Greek merchants in Bruges from the time of the rule of Duke John the Fearless in Burgundy and Flanders. Shortly after 1453 this community included a number of individuals from the famous and widely branched house of the Laskarids: we hear of one Antonius Loscart, "marchand grossier de Bruges," and one Michiel Loschart, "ruddere van Constantinople."¹⁶⁰ Some of them may have been living in the city for some time, but some no doubt arrived in Flanders only after the fall of Constantinople. Perhaps the Burgundian crusading expedition in 1444 and the following years, which was simultaneously a trading enterprise,¹⁶¹ also established or reinforced economic ties between the imperiled center of the Byzantine Empire and the expatriate Greeks living on the other side of Europe. In London, too, a variety of commercial activities by Greeks and a small Greek settlement are attested from the early fifteenth century on. In 1445/46, a certain George of Constantinople imported sweet wine to England on Italian ships through the port of London.¹⁶² In 1449 Andronicus de Constantinople exported two shiploads of English cloth to the East on Venetian galleys.¹⁶³ He may be identical with Andronicus Effomatos, who had settled in London as a maker of gold thread, and who likewise imported and exported his wares on Italian ships.¹⁶⁴ Knowing what we do, the report in an English chronicle, that

¹⁵⁸ Labib, *Handelsgeschichte*, 343; Dölger, *Regesten*, 5, 97f (no. 3328), gives Sommas as the Greek name version.

¹⁵⁹ C. Potvin, *Oeuvres de Ghillebert de Lannoy, voyageur, diplomate et moraliste* (Louvain, 1878), 110.

¹⁶⁰ E. van den Bussche, *Une question d'orient au Moyen-Age: Documents inédits et notes pour servir à l'histoire du commerce de la Flandre particulièrement de la ville de Bruges avec le Levant* (Bruges, 1878), 28 n. 38; H. Taparel, "Notes sur quelques réfugiés Byzantins en Bourgogne après la chute de Constantinople," *BalkSt* 28.1 (1987): 57f.

¹⁶¹ Cf. W. Schulz, *Andreaskreuz und Christusorden: Isabella von Portugal und der burgundische Kreuzzug* (Fribourg, 1976), 159ff.

¹⁶² J. Harris, "Bessarion on Shipbuilding: A Re-interpretation," *BSI* 55.2 (1994): 293.

¹⁶³ J. Harris, *Greek Emigrés in the West, 1400–1520* (Camberley, 1995), 88.

¹⁶⁴ *Ibid.*

Emperor Manuel II, during his visit to England in late 1400–early 1401, was informed by Greek merchants about the political events on the eastern border of his empire, seems credible.¹⁶⁵

Against this background, the still puzzling travelogue of Laskaris Kananos,¹⁶⁶ of whom little is known otherwise, takes on a very surprising but entirely realistic dimension: the journey seems to have begun in Sluis, a port of Bruges,¹⁶⁷ and led through the entire region of the Baltic Sea all the way to Norway and Iceland. Along the way our traveler also landed in England on several occasions. He was a man of some education, and his interests included the economic conditions, food and drink, and monetary system and commercial practices in the countries he visited. One thing he thought particularly worth mentioning was that people in the city of Bergen did not use coins of any kind, whether gold, silver, copper, or iron, but engaged in commerce only through barter.¹⁶⁸ Kananos, much like the Greeks in Bruges and London, undertook his northern voyage, the character of which is not entirely clear, on an Italian ship or at least with Italian companions.¹⁶⁹ The mention of Cape San Vincente in Portugal could indicate that it was also such a ship that took him from his Byzantine home in the south to this outpost of Byzantine-Greek trading activity in the European West, where he may even have been welcomed by members of his own family.

Far from being restricted solely to local and regional trade, Byzantines of the late period tenaciously defended their traditional spheres of activity and appeared even in distant trading regions. In the struggle against their superior Italian competitors, at least some Byzantine merchants of the late period still learned the new commercial techniques and methods developed by the Italians, proved willing to take risks of their own, and were able to create their own economic identity by combining old and new economic experience. As junior partners in the slowly emerging collaboration with western competitors, they gained access to the economic zones created by the Latin colonial overlords in the Byzantine Empire and were able to use the trading routes they had established, occasionally even to reach the far ends of the greater economic sphere the Latins had formed. Some of what the Byzantine economic forces once had was lost during this late period, but some of what they would need for the future they were able to acquire during this time. What they preserved and what they acquired were enough for their own lives, but not enough to ensure the survival of their state.

¹⁶⁵ Thomas Walsingham, *Annales Richardi Secundi et Henrici Quarti, Regum Angliae, 1392–1406*, ed. H. T. Riley, Rolls 28 (London, 1866), 336; cf. D. M. Nicol, "A Byzantine Emperor in England: Manuel II's Visit to London in 1400–1401," *University of Birmingham Historical Journal* 12 (1970): 220f.

¹⁶⁶ Sp. Lambros, *Μικτὰὶ σελίδες* (Athens, 1905), 580; V. Lundström, "Laskaris Kananos' Reseanteckningar från de nordiska länderna," *Smärre Byzantinska Skrifter utgifna och Kommenterade* (Uppsala-Leipzig, 1902), 1:14–17; German translation by F. Grabler, "Die Nordlandreise des Laskaris Kananos," in *Europa im XV. Jahrhundert von Byzantinern gesehen* (Graz, 1954), 103–5; cf. Matschke, *Die Schlacht bei Ankara*, 235 n. 430; Makris, *Studien*, 238ff.

¹⁶⁷ Grabler, "Die Nordlandreise," 104f.

¹⁶⁸ Ibid., 103; cf. T. Hägg, "En bysontiner besöker Bergen," *Hellas og Norge* (Bergen, 1990), 221–28.

¹⁶⁹ Grabler, "Die Nordlandreise," 102.

Varieties of Late Byzantine Trade and Types of Late Byzantine Merchants

Professional merchants, that is, people who were active primarily as buyers and sellers of goods and earned their living chiefly from this work, existed throughout the late Byzantine period in various forms. They included the many small shopkeepers who owned or leased their stores and were surely not very well-off. Alone or with a few assistants they purchased trading goods from local and especially western wholesalers¹⁷⁰ and sold them retail to local consumers. To that end they usually formed small, short-term partnerships and often ran into difficulties making the payments on the goods they purchased, as we learn especially from the account book of the Venetian Badoer in Constantinople, though this is also attested in other sources and for other Byzantine cities. They included the undoubtedly less numerous small itinerant traders who sometimes traveled with their goods on the vessels engaged in coastal and tramp trade; it was on such a ship that the rhetorician and diplomat Thomas Magistros made his homeward journey from Constantinople to Thessalonike around 1310. But there is no doubt that these traders also sailed the coasts of the Black Sea and the Peloponnese.¹⁷¹ Among them was a man whose name was probably Petriotes and who, shortly after 1400, owed 81 hyperpera to Demetrios Angelos and Alexios Kapelitzes. He was able to repay this sum only in installments, which always came due when he returned to Constantinople from another (trading) journey.¹⁷² As a whole this group probably did not have much economic clout, but it was also not greatly dependent on the general economic situation. Even if taxes and dues were a significant burden, and loans and usurious interest rates posed considerable hazards, these things threatened the individual much more than the group. The latter always sought and found the ways and means of regenerating itself, because it was indispensable for the material life in a society whose economy was largely commercial in orientation.

Late Byzantine commerce was also shaped in important ways by another, not very coherent group of people; at times its influence may even have exceeded that of the other groups. These were people who could and did use the access to goods and commodities that came with governmental or private offices to bring these goods to market themselves or through their agents, and to redirect the profits entirely or in part into their own pockets. Among them were the caretakers of the imperial horses and pack animals, who could turn into grain dealers by acquiring feed grain either at no charge or at reduced prices. Among them was the overseer of the capital's fishing industry: he

¹⁷⁰ The author of the Black Sea account book from the second half of the 14th century published by Schreiner, *Texte*, 1:33ff, was surely a native wholesale merchant.

¹⁷¹ A classic description of this form of commerce comes from Thomas Magistros: M. Treu, "Die Gesandtschaftsreise des Rhetors Theodulos Magistros," *Jahrbücher für classische Philologie*, suppl. 27 (1900): 14 (cf. G. Makris, "Ships," *EHB*). Its presence in the Black Sea is indicated in Laiou, "Byzantium and the Black Sea," 172, 174. Its existence in the region of the Peloponnese is emphasized in a letter to the author from E. Cupane and E. Kislinger with reference to J. Chrysostomides, *Monumenta Peloponnesiaca* (Camberley, 1995).

¹⁷² H. Hunger, "Zu den restlichen Inedita des Konstantinopler Patriarchatsregisters," *REB* 24 (1966): 61f (no. 3).

transformed himself into a fish dealer by raising the dues in kind from Constantinople's fishermen. Among them were city governors and tax officials, singly or as a group. These sellers on the market or outside the market became dangerous competitors of the merchants, and they had a significant impact on the development of price mechanisms. They constituted a potent group at least as long as the late Byzantine state and the late Byzantine ruling élite still had a meaningful number of such functions and posts to distribute.

We find another type of seller on the late Byzantine market—a member of the local or regional landowning class of Thessalonike—in a recently edited account book.¹⁷³ He dealt chiefly in grain, wine, and other produce of the field and garden, but also with textile and silk products, silk cocoons, and raw cotton. Some of these goods unquestionably came from the production of his own land, some came most likely also from surplus produced by his and other peasants, which he bought at a preferential price to sell on the urban market for an additional profit. Those who bought his goods included urban shopowners who inserted themselves between him and the urban consumers, but not a few were also landowners like himself engaged in the same activity. The buyers presumably also included minor dignitaries and local functionaries, though we cannot find any indication that he gained access to his goods by way of these offices and functions. The activities of this man, who evidently also represents a certain type, were largely confined to the immediate hinterland of Thessalonike; of the neighboring cities, only Serres makes its appearance. Even more striking than this geographical limitation is the restricted circle of his business partners: there is nothing to indicate that he sold his grain and especially his textile raw materials to interested buyers from afar, let alone to foreigners, even though at least Venetian merchants had a strong presence in the city.

At least for the early Palaiologan period, there is concrete evidence that large landowners acted as suppliers of agrarian products, especially grain, to Venetian and Genoese exporters in the economic region of the capital.¹⁷⁴ A grain supplier to the Ragusans named Camblacus/Tzamlakon may very well have been from the greater Thessalonike region, various opinions to the contrary notwithstanding,¹⁷⁵ since the Adriatic republic sent its buyers into this very area on several occasions of grain shortage.¹⁷⁶ Perhaps what happened in and around Smyrna at the end of the thirteenth century also happened in Thessalonike: these magnates not only displaced an older, local landowning class from its holdings, but also pushed it out of the trade in grain and raw materials with the Latins. But perhaps around 1360 the great era of large-scale landowners who produced for the outside market was almost over, since by then the political and

¹⁷³ Schreiner, *Texte*, 79ff (no. 3). Is the Theodore Karabas mentioned by Laiou, "Agrarian Economy," 360–61, perhaps a similar type of merchant?

¹⁷⁴ Cf. Bertolotto, "Nuova serie," 526. Agents of the emperor and of the *vestiarion* also appear as grain sellers: *ibid.*, 522f, 533.

¹⁷⁵ *Monumenta spectantia historiam Slavorum*, 1:159, 241; Krekić, *Dubrovnik*, 198f (nos. 212, 114); cf. *ibid.*, 90 n. 3.

¹⁷⁶ Cf., for example, the instructions to Junius Bunić in 1377: Krekić, *Dubrovnik*, 216 (no. 321).

economic stranglehold on Thessalonike, first by the Serbs and then by the Turks, had long since begun.

However, it was not only owners of larger and very large estates who acted as suppliers of agrarian products to domestic and foreign buyers.¹⁷⁷ Small farmers, too, played that role, and there is good documentation that western merchants sent their buyers also to peasant farms and took delivery of peasant goods at numerous landing sites.¹⁷⁸ Much more difficult to answer is the question whether late Byzantine villagers also sold their neighbors' harvest along with their own, whether they journeyed to fairs and into the cities with their own products as well as those of others, and whether they remained in the cities temporarily or even permanently to establish themselves in commerce. The peasant who trades ("che faza mercandantia") was certainly a familiar figure in the Latin territories of the Romania.¹⁷⁹ If such peasants also existed in the late Byzantine period, they were presumably not as numerous. Yet we do have some weak indications of such activity by rural folk. For one, many rural registers of property and dues (the *praktika*) list, alongside or in addition to the fair, other dues that indicate commercial activity. In the village of Doxompous at Lake Achinos, for instance, we find one sum in the amount of 50 hyperpyra.¹⁸⁰ It was made up of the *kommerkion*, the *gomariatikon*, the *opsonion*, and the *katagogion*; this means that, in addition to a commercial tax, it included a ship freight or cargo bale tax,¹⁸¹ a provisioning or fish tax,¹⁸² and an accommodation fee.¹⁸³

In the villages of Thermon and Lulon, we find a list of dues¹⁸⁴ that include, alongside the *kommerkion*, also a *poron* (a fording fee)¹⁸⁵ and a *topiatikon*, which comprises a host of dues that could also be commercial in nature.¹⁸⁶ In addition to landing sites along the seashore, it appears that fording sites at rivers and inland lakes, as well as inns and hostels at these locations, could also become the starting point for peasant commercial activity. There were also a number of *paroikoi* of the monastery of Lavra who resettled into cities from their original villages, most likely in connection with artisanal and

¹⁷⁷ On the commercialization of the production of the large estates, see Laiou, "Agrarian Economy," 347–48.

¹⁷⁸ On peasant production for the market, see Laiou, "Agrarian Economy," 351–52.

¹⁷⁹ Cf. D. Jacoby, "Les états latins en Roumanie: Phénomènes sociaux et économiques," *Actes du XVI^e Congrès international d'études byzantines* (Athens, 1976), 1.1:40.

¹⁸⁰ Lemerle et al., *Actes de Lavra*, 2:170 (no. 104).

¹⁸¹ Cf. P. Schreiner, *Studia Byzantino-Bulgarica* (Vienna, 1986), 170, note to line 30.

¹⁸² Cf. *ibid.*, 160, note to line 20; D. Jacoby, "The Venetian Presence in the Latin Empire of Constantinople (1204–1261): The Challenge of Feudalism and the Byzantine Inheritance," *JÖB* 43 (1993): 179 n. 124.

¹⁸³ Perhaps this levy is close to the κατάβολος; on the latter, see E. Schilbach, *Byzantinische metrologische Quellen* (Thessalonike, 1982), 159f; on the Latin counterparts, see Jacoby, "The Venetian Presence," 179f and n. 131.

¹⁸⁴ I. Sakkelion, "Μιχαὴλ Παλαιολόγου ἀνέκδοτον χρυσόβουλλον περὶ τῶν παρ' αὐτοῦ τῇ Μ. Ἐκκλησίᾳ δωρηθέντων κτημάτων," *Πανδώρα* 15 (1864): 29.

¹⁸⁵ Cf. Dölger, *Regesten*, 3:52f (no. 1956).

¹⁸⁶ Cf. Ch. DuCange, *Glossarium ad scriptores mediae et infimae graecitatis* (Lyons, 1688), entries: τοπική, τοπιατικόν; K.-P. Matschke, "Bemerkungen zum späthbyzantinischen Salzmonopol," in *Studia byzantina* 2, ed. J. Irmscher and P. Nagel (Berlin, 1973), 45f.

commercial activity. Among them was the son of a butcher or agent for business deals involving meat.¹⁸⁷ In Doxompous, too, we find in 1317 a *paroikos* who was a trader,¹⁸⁸ though it is unclear whether he plied his trade locally or outside the village. It is also unclear where the many local fishermen sold their catches, whether at home or possibly even on the market of Serres. The step from being a local meat producer or fisherman to being a meat and fish dealer who maintained contacts with his native village and used them in his new line of work would have been an entirely logical one, but it remains quite unclear whether it really happened this way and how many may have taken this or similar steps.

Just how strongly the market economy and free-enterprise thinking had pervaded at least the regions close to the cities during the late Byzantine era is revealed by the account of the tough bargaining over wine and other provisions between a traveling party from the capital and one resident of a village near Rhaidestos: the seller tried to drive up the price he was offered by reminding the buyers of prices in the nearby city.¹⁸⁹ It is striking that all information about peasant commercial activity and participation in the markets dates from the period prior to 1340, another indication that the conditions of peasant life deteriorated markedly around the middle of the fourteenth century.¹⁹⁰

At around the same time, however, we can observe the emergence of another group that was important to late Byzantine trade. This group is most appropriately described as one of aristocratic entrepreneurs: aristocratic because it was clearly rooted in the late Byzantine upper class and also drew most of its members from it; entrepreneurs because its members did not confine themselves to commercial activities. Instead, they combined them with financial and even some manufacturing activities and pursued it all on a scale that went clearly beyond the average scope in Byzantium. Moreover, on various occasions—for example, ransoming the prisoners of Nikopolis in 1396, provisioning the capital besieged by the Turks between 1394 and 1402, and possibly when it came to formulating its own policies in the events surrounding the crusade of 1443/44—this group sought out and made contact with non-Byzantine business circles in the Romania, and this allowed it to move into certain realms of political finance. The history of the Notaras family is especially characteristic of this development,¹⁹¹ though many other aristocratic families were in some way or other affected by it. These entrepreneurs, too, owned land and made use of state benefices, but only on the modest scale that was left to the Byzantine state after the mid-fourteenth century, which is why these two aspects were not decisive for the economic profile of the group.

¹⁸⁷ Lemerle et al., *Actes de Lavra*, 2:234, 225 (no. 109); cf. K. V. Khvostova, "Nekotorye voprosy vnutrennei torgovli i torgovoi politiki v Vizantii XIV–XV vv.," *VizVrem* 50 (1989): 41f.

¹⁸⁸ Lemerle et al., *Actes de Lavra*, 2:167.

¹⁸⁹ Ahrweiler, "Le récit," 24.

¹⁹⁰ I am indebted to A. Laiou for pointing out this fact.

¹⁹¹ Cf. K.-P. Matschke, "Personengeschichte, Familiengeschichte, Sozialgeschichte: Die Notaras im späten Byzanz," in *Oriente e Occidente tra Medioevo ed età moderna: Studi in onore di Geo Pistarino*, ed. L. Balletto, 2 vols. (Genoa, 1997), 2:787–812.

Centered in the capital of Constantinople, the group was formed substantially by an influx from the Byzantine province, from various cities, and especially from Monemvasia. Of great importance to the character of this group were also the impulses that emanated from Greek commercial and entrepreneurial forces in the Latin colonies. These forces took shape in the Genoese and Venetian colonial milieu on the islands of Chios and Crete, in the southern Peloponnese, and possibly also in the Crimea, and they had not yet lost the traditional ties to the Byzantine world, in fact they may have revived them. They became important intermediaries between the western and the Byzantine world of commerce. They made it easier for the Byzantine aristocrats who were pushing into this world to gain access to the economic and trading system the Latins had created in the eastern Mediterranean, and they established personal and material contacts with the most important Byzantine representatives of this system. In so doing they played a big part in keeping the late Byzantine economic system from falling even further behind that in the West; in fact, the gap between the two may have even narrowed somewhat. These multifarious economic contacts also made it possible to dismantle, at least in part, the mental barriers that Byzantine society had erected against business involving goods and money, barriers that were handed down into the late period. They made room in Byzantine economic circles, and in the educated classes affiliated with them, for suggestions that it was not only the rulers and their officials, but merchants and artisans, too, who were open to scholastic knowledge and the wisdom of teachers.¹⁹² They allowed the articulation of the belief that the mint and the ship's deck were perhaps more important to the survival of Byzantium than the farmland and the battlefield, the traditional proving grounds of the Byzantine élite.¹⁹³

The progressive territorial shrinkage of the late Byzantine Empire did not necessarily cause this development, though at the very least it influenced and promoted it. The realization that the sea was still strong while the land was increasingly breaking away was expressed on numerous occasions from the mid-fourteenth century on, and evidently it did not fail to have some specific internal consequences. The protagonist of the late Byzantine turn toward the sea was a self-made man from the civil war period of the early fourteenth century, Alexios Apokaukos—salt mine operator, tax administrator, banker, financial chief, fleet captain, governor of the capital, and *spiritus rector* of the imperial regency between 1341 and 1345. If we set the successful activities of Byzantine merchants in the Black Sea region, of Byzantine financiers in the capital, and of Byzantine seamen in the Aegean against the backdrop of his efforts to control the Bosphoros and create an economic triangle between Constantinople, Thessalonike, and Chios, one might conclude, after all, that one root of the aristocratic entrepreneurship of the late period can be found in these conflicts and their results. At the same time, it remains true that there is no direct connection to the representatives of this

¹⁹² Michael Apostoles, salutation to his teacher John Argyropoulos, ed. Sp. Lambros, 'Ἀργυροπού-
λεια (Athens, 1910), 230.

¹⁹³ This is my interpretation of a passage in the consolatory speech of John Argyropoulos to Emperor Constantine XI on the death of his mother; *ibid.*, 59.

entrepreneurial class in the fifteenth century. The reason is that the protagonists of the turn toward the sea around the mid-fourteenth century suffered a serious defeat, and the victors were unable and unwilling fully to grasp the significance of this change of course; it was only the subsequent events that drove it home to them.

As we have seen, late Byzantine trade and commerce involved many people and various groups. The nature of their commercial involvement and the intensity of their commercial integration were decisive in shaping the character of the late Byzantine market economy. Only a minority of those involved were professional merchants. However, lest this fact give rise to one-sided and overdrawn conclusions, one should point out that only a minority of those who had resettled from the northern Italian cities to the Romania earned their livelihood exclusively or even predominantly from commercial activity. In the Latin colonies we find military colonists from the nobility who focused their activities explicitly on the production and sale of grain. Officials with a humanistic education were busy to varying degrees with commercial deals on the side. Finally, the peasant merchant was no rarity in these colonies, even if the peasants who made the switch to commerce and trade belonged chiefly to the local population.

Only the aristocratic entrepreneurs were a novelty in the late Byzantine period; the other types and groups are also found in other periods of Byzantine history, though in different variations and with different characteristics. But even this entrepreneurship was a manifestation of the declining Byzantine society much more so than a sign that this society was being transformed. It was not the creation of a rising middle class but the result of the forced break by various Byzantine upper strata and élites with traditional social standards and ways of life. Though it adopted many impulses from the West, it did not become a Byzantine version of early capitalist entrepreneurship. It lacked not only the commercial and financial caliber of western entrepreneurs, but also the industrial basis on which this entrepreneurship had arisen in the late medieval West; it was that basis that allowed western merchants to extend their commercial expansion into the Romania.

Conclusion

At the beginning of late Byzantine economic development were the visible efforts of the Palaiologan emperors to revive traditional forms of political supervision and guidance of the economy. However, it was soon apparent that these efforts were not very successful, since the late Byzantine state was unable to gain full control of either the foreign or domestic economic forces. Gradually the state lost its influence on the modalities of trade and the price mechanisms, and its control over the outflow of precious metal and perhaps even over the minting of coins. Late Byzantine officials, who were supposed to implement this regulatory policy, used the state prerogatives placed into their hands to pursue their private business. The social norms that forbade the aristocracy, the military, and the civil servants outright from engaging in business, or permitted it only to a limited extent, gradually lost their binding force. But private commercial activity was also affected and impeded by the crises in foreign policy and the

internal erosion of the empire. The commercially active official, and the landowning and the peasant trader, who are more or less clearly discernible in the early Palaiologan period, gradually disappear after the mid-fourteenth century and make room for an aristocratic entrepreneurship. This entrepreneurship had only weak ties to agriculture and landholdings and had lost its interest in state offices. It used its improved contacts to the western business world to accumulate substantial sums of money and to establish a variety of commercial connections. But for all that, it was no longer able to reach the western level of early capitalist entrepreneurship.

The Levant Trade in the Middle Ages

John Day

The eastern and western Mediterranean formed part of a single commercial civilization in the Middle Ages, and the two regions were economically interdependent through trade (in varying degrees). This chapter focuses on this aspect of the question, essentially from the viewpoint of western merchants. The Levant trade, according to a Catalan text of 1453, was “the head and principal of all commerce.”¹ It was certainly for centuries the most profitable whether with Byzantium or the Muslim Near East. The subject, on the traces of Wilhelm Heyd’s masterly *Histoire du commerce du Levant au Moyen Age*,² is often treated as the opening chapter in European capitalism’s march to dominate the world, a premise that has sometimes tended to obscure the basic mechanisms of that trade.

The key to economic relations between Europe and the East in the Middle Ages, and indeed since Roman times, was the permanent deficit in the West’s balance of visible trade, the result, in the words of Fernand Braudel, of Europe’s passion for oriental luxuries combined with the East’s passion for silver.³ Curiously, if classical and modern historians never seem to have questioned this simple fact, considering the steady flow of precious metal from West to East, the same cannot be said of many eminent medievalists, impressed by the West’s growing superiority in the organization of commerce and shipping and by the penetration of eastern markets by western currencies such as the grosso, the florin, the ducat, and the carlino, and doubtless influenced as well by the canons of development economics.

The Levant trade revived in the tenth to eleventh centuries in Byzantine Italy “at the points,” as Maurice Lombard once wrote, “where the flow of gold from the Muslim world encountered the flow of goods from Byzantium.”⁴ Amalfi, Naples, Bari, and Ven-

¹ Cited by M. Mollat, *Jacques Coeur, ou l’esprit d’entreprise au XVe siècle* (Paris, 1988), 168. The term “Levant” is here understood to mean the eastern Mediterranean and the Black Sea, that is, Greek as well as Muslim lands.

² W. Heyd, *Histoire du commerce du Levant au moyen age*, 2 vols. (Leipzig, 1885–86).

³ F. Braudel, *Civilisation matérielle: Économie et capitalisme, XVe–XVIIIe siècles*, vol. 3, *Le temps du monde* (Paris, 1979), 423.

⁴ M. Lombard, “Les bases monétaires d’une suprématie économique: L’or musulman du VIIe au XIe siècle,” *Annales ESC* 2 (1947): 143–60.

ice were joined at the time of the crusades by Genoa, Pisa, Ancona, Messina, Marseilles, Montpellier, Barcelona, and a host of lesser towns. The crusading period (1095–1291) was marked by the creation of numerous Latin trading colonies in the Near East with their own consuls, hostels, warehouses, marketplaces, and churches; by the creation of colonial dependencies by Venice and Genoa in former Byzantine lands; by the pursuit of mercantile profits well beyond the coastal cities in the direction of Persia, India, and China.⁵ In the fourteenth to fifteenth centuries, important changes, produced by military events, occurred in the economic relations between Europe and the East. With the disappearance of the last Crusader states in the Holy Land and the papal embargo on trade with the Muslims (1291–1344), alternate spice markets developed on Rhodes and Cyprus, in Little Armenia, Constantinople, and the Black Sea ports.⁶ The breakup of the Mongol empire closed the silk route to China, and the Turkish conquests undermined the Italians' commercial hegemony in the Black Sea. But western trade resumed meanwhile with the Mamluk sultanate, reaching its height in the second half of the fifteenth century.⁷ For Wilhelm Heyd it was the arrival of the Portuguese in India and the occupation of Egypt by the Turks that constituted the "two final disasters."⁸ In reality we know now, thanks to F. C. Lane and Fernand Braudel, that the traditional Levant trade enjoyed a vigorous revival in the second half of the sixteenth century. The coup de grâce was not delivered by Vasco da Gama but by the Dutch, well over a century later.

For a general picture of the balance of payments between Europe and the East, historians examine various elements concerning monetary movements, the merchandise trade, and commercial practices characteristic of that trade. As noted, the movement of capital (bullion and specie)—speculative movements apart—was always from West to East, proof that the Levant trade in the Middle Ages was a deficit trade. Latin merchants regularly imported expensive luxuries from the East: spices, dyes, sugar, silks, pearls, precious stones. But medieval Europe also depended on that region for basic raw materials. Silk was imported from Persia, the shores of the Caspian, and China. Alum, used in dyeing as a mordant, prior to the discovery of rich deposits at Tolfā in the Papal States in 1462, came from Anatolia, northern Syria, and upper Egypt; potash, used in the glass and soap industries, from Syria. Syria, Cyprus, and Little Armenia produced the cotton for the manufacture of Lombard and south German fustians. This list of eastern imports is far from complete; it fails to include, among others, typical products of the Black Sea region: wheat, furs, skins, pitch, wax, sturgeon, and caviar.

In exchange, to the middle of the twelfth century—based on the commercial contracts of the Genoese notary Giovanni Scriba—exports to the Levant consisted almost exclusively of gold and silver in different forms (Muslim gold pieces, silver ingots, gold

⁵ R. S. Lopez, "L'extrême frontière du commerce de l'Europe médiévale," *Le Moyen Age* 69 (1963), and, in general, Heyd, *Commerce du Levant*.

⁶ E. Ashtor, *Levant Trade in the Later Middle Ages* (Princeton, N.J., 1983), 3–64.

⁷ *Ibid.*, 433–512.

⁸ Heyd, *Commerce du Levant*, 2:508–52.

thread, and silverware). But toward the close of the century, the Genoese notaries' deeds begin to mention certain luxuries: fine woolen and linen cloth, northern furs, Mediterranean coral, and even a spice (saffron).⁹ The characteristic western exports, however, in the thirteenth to fourteenth centuries, were nonluxuries such as timber, metals, and foodstuffs (wine, olive oil, dried fruit, honey, cereals on occasion), which were sometimes transported on merchant galleys, a type of vessel ill-suited to bulk cargoes, for lack of more valuable merchandise.¹⁰

Because of the deficit in the balance of trade, which resulted in a permanent shortage of foreign exchange, a veritable money market failed to develop in the eastern Mediterranean. The exchange and arbitrage operations that marked the emergence of multilateral monetary relations in western Europe were limited in the East, where credit was so scarce that a six months' bill drawn on Venice or Genoa at Alexandria or Constantinople in the fourteenth to fifteenth centuries cost up to 12%.¹¹ This also helps to explain why most Latin merchants continued to practice "venturing," short-term partnerships involving a consignment of goods or cash to the active partner for sale or investment and dissolved on return from the East or at the conclusion of a single commercial operation abroad.¹²

In 1376/77, Genoese exports of goods to the Levant (Alexandria, Famagusta, Beyrouth, Rhodes) amounted to barely 248,500 lire (L.), plus L. 35,800 in specie and bullion, chiefly gold, compared to L. 626,200 in imports of goods and an insignificant L. 100 in gold. (There is no breakdown of exports and imports for "Romania." Based on the customs farm of the "carats of Pera" that same year, Genoese and other traffic through the straits in both directions amounted to about L. 500,000).¹³

The balance of trade with the Levantine markets was even more unfavorable than these figures suggest in earlier centuries. In the first commercial treaty between Venice and Byzantium, the Golden Bull of 992, Venetian ships in the Bosphoros were subject to an exit tax seven times the entry tax, reflecting in all likelihood a rough proportion of exports to imports.¹⁴

Two and a half centuries later, at the height of the "commercial revolution," Genoese ship charter contracts for "Oltremare" (Syria) provide for an inbound cargo seven times as voluminous as the outbound cargo.¹⁵ It has been estimated that the overall

⁹ E. H. Byrne, "Genoese Trade with Syria in the Twelfth Century," *AHR* 25 (1919-20): 191-219.

¹⁰ J. Day, "Prix agricoles en Méditerranée à la fin du XIVe siècle (1382)," *Annales ESC* 16 (1961): 629-56; F. Thiriet, *Régestes des délibérations du Sénat de Venise concernant la Romanie*, 3 vols. (Paris-The Hague, 1958-61), 1: no. 278.

¹¹ *Galearum marinariorum introitus et exitus*, 1382, Finanza dell'antico comune 724, Archivio di Stato, Genoa, fol. 114; Ashtor, *Levant Trade*, 376-77; *Il libro dei conti di Giacomo Badoer*, ed. U. Dorini and T. Bertelè (Rome, 1956). Cf. G. Luzzatto, *Storia economica di Venezia dall' XI al XVI secolo* (Venice, 1961), 172-79.

¹² G. Luzzatto, "La commenda nella vita economica dei secoli XIII e XIV," in *Studi di storia economica veneziana* (Padua, 1954), 59-81; *Galearum marinariorum*, fols. 97-111.

¹³ J. Day, *Les douanes de Gênes, 1376-1377*, 2 vols. (Paris, 1963).

¹⁴ Luzzatto, *Storia economica di Venezia*, 13.

¹⁵ E. H. Byrne, *Genoese Shipping in the Twelfth and Thirteenth Centuries* (Cambridge, Mass., 1930), 85-88 (doc. dated 1250).

proportion of imports to exports in the fifteenth century was of the order of 2–2.5:1 (the same as for Genoa in 1376/77).¹⁶ There was still not the slightest sign of the reversal of the situation in favor of the West, contrary to the thesis just cited. Thus R.-H. Bautier writes that “one can affirm that between the middle of the twelfth and the middle of the thirteenth century, the balance of trade shifted in favor of Europe, with, as a result, the enrichment of the West at the expense of the East.”¹⁷ E. Baratier, historian of the commerce of Marseilles in the Middle Ages, is of the same opinion: “The balance of payments beginning in the thirteenth century shifted in favor of the West, draining more and more Byzantine and Islamic gold to Europe, to a point where it seemed for a time that the countries of the Levant were economically exploited by the Italian merchants.”¹⁸ So, too, is Michele Luzzatti: “The balance of trade between the East and the West henceforth favored continental Europe, in a position, thanks in particular to the Italian intermediaries, to profit from the exchange, supplying raw materials and manufactured goods in great quantities and superior in value to those imported: timber, iron tools, Flemish, French and English woolens . . . German silver via Venice” (note, however, that German silver is here considered an export commodity rather than a balancing item).¹⁹ It should be said in this connection that if the crisis in the artisan trades in the Muslim Near East in the late Middle Ages, as documented by Eliyahu Ashtor, invited the import of increasing quantities of manufactured goods from the West, the resulting improvement in Europe’s current accounts was probably more than offset by a boom in the imports of spices, which seem to have doubled between 1400 and 1500.²⁰

In fact, if one excludes speculative movements involving Mongol gold for German silver (via Constantinople and Venice) in the fourteenth century, the drain of precious metals to the East never stopped. In a Florentine merchant handbook of the early fourteenth century, silver ingots and Venetian silver *grossi* were regular exports to all the Near Eastern markets.²¹ Francesco Pegolotti around 1340, Jacques Coeur in 1453, and Bartolomeo di Pasi at the close of the same century confirm the irreversible character of the flow from west to east, where it enjoyed a premium of 5–15%.²²

¹⁶ E. Ashtor, *Le métaux précieux et la balance des paiements du Proche Orient à la basse époque* (Paris, 1971), 96.

¹⁷ R.-H. Bautier, “Les relations économiques des Occidentaux avec les pays de l’Orient au moyen âge,” in *Sociétés et compagnies de commerce en Orient et dans l’Océan indien*, ed. M. Mollat (Paris, 1970), 301–4.

¹⁸ E. Baratier, “L’activité des Occidentaux en Orient au moyen âge,” in *Société et compagnies de commerce en Orient et dans l’Océan indien*, ed. Mollat (as above, note 17), 341.

¹⁹ M. Luzzatti, *Storia dell’economia italiana*, vol. 1, *Il medioevo dal crollo al trionfo* (Turin, 1990), 57.

²⁰ E. Ashtor, “The Volume of Levantine Trade in the Later Middle Ages,” *Journal of European Economic History* 4 (1975): 573–612; C. H. Wake, “The Changing Pattern of Europe’s Pepper and Spice Imports ca. 1400–1700,” *ibid.* 8 (1979): 361–403.

²¹ Bautier, “Les relations économiques,” app., 311–20 (Constantinople and Pera, Tana, Kaffa, Thelogos, Phokaia, Laia, Tripoli, Beyrouth and Damascus, Acre, Alexandria and Cairo, etc.).

²² F. Balducci Pegolotti, *La pratica della mercatura*, ed. A. Evans (Cambridge, Mass., 1936), 219–20; Mollat, *Jacques Coeur*, 245; Bartolomeo di Pasi, *Tariffa de pesi e misure* (Venice, 1557), 149–50.

For the fifteenth century, Venice provides the best figures on the flight of precious metal to the Levant. Emmanuel Piloti, a Venetian from Crete, in 1420, and the doge Tommaso Mocenigo at about the same date, both insist on the fundamental importance for Venetian maritime commerce of the gold and silver from central Europe and the Balkans. Piloti, without providing figures, speaks of regular arrivals of gold by the “German Road” to the Fondaco dei Tedeschi and thence to the mint, where it was converted into ducats before taking ship for the East, especially Egypt. According to Mocenigo, Venetian silver money exported to the East, including the Venetian colonies, amounted to the equivalent of about three metric tons annually.²³ In 1433, a fleet of ten merchant galleys with goods worth one million ducats, plus 400,000 ducats in cash sailed from Venice for Alexandria and Beyrouth. In 1494, according to Marino Sanudo, Venetian merchants transported 220,000 ducats to Egypt and 120,000 to Syria. Finally, in 1512, the Venetian ambassador to the sultan noted that prior to the voyage of Vasco da Gama, Venice exported annually to Alexandria 3,000–4,000 tons of olive oil, 3,000–4,000 quintals of copper, 300,000 ducats worth of general merchandise, and the same sum in cash.²⁴

These different estimates permit one to conclude that Venice alone in the fifteenth century shipped about 300,000 ducats, the equivalent of one metric ton of gold, to the Levant in normal years to settle its accounts with that region, which was, in effect, flooded with Venetian ducats in the late Middle Ages, just as Europe in our own day is flooded with dollars—or more precisely with dollar credits, or eurodollars—because of the chronic deficit in the United States’ balance of payments.²⁵

For the Italian, Provençal, or Catalan merchants engaged in trade with the Levant, the problem seems to have been to procure at almost any cost the oriental products demanded with insistence by a “seller’s” market in Europe. The fact that it was often easier to obtain goods on credit or in consignment than to raise cash when the convoys were preparing to set sail for the East, a time of “tight” money, seems to have encouraged the systematic dumping of western products on the Levantine markets. The accounts of a Genoese merchant in 1382 show that he sold English woollens, Irish serges, and a large consignment of ermine pelts in Cyprus and Syria all at a loss, or bartered them for objects of lesser value. He had to await his return to Genoa and the sale of pearls from Damascus, cottons and silks from Tripoli, Laodikeia, and Alexandria to make good his losses and realize a profit (as in the expression “faire ses retours”).²⁶ In the same way, the accounts of Andrea Barbarigo, a Venetian merchant in Syria in 1431–

²³ *Traité d’Emmanuel Piloti sur le passage en Terre Sainte, 1420*, ed. P. H. Dopp (Louvain–Paris, 1958), 149–50; F. C. Lane, “Exportations vénitiennes d’or et d’argent de 1200 à 1450,” in *Etudes d’histoire monétaire, XIIe–XIXe siècle*, ed. J. Day (Lille, 1984), 29–48.

²⁴ F. C. Lane, *Andrea Barbarigo, Merchant of Venice: 1418–1449* (Baltimore, Md., 1944), 76–77; Ashtor, *Les métaux précieux*, 66–67.

²⁵ The same was the case in the 13th and 14th centuries with respect to the Venetian silver grossi, and in the 11th and 12th centuries for the dinars and dirhams originating in the Maghreb. For the latter, see S. Goitein, “Le commerce méditerranéen avant les Croisades,” *Diogenes*, no. 59 (1967): 52–68.

²⁶ *Galearum marinariorum*, fols. 97–117.

36, show that he made his profits from the sale of cotton exported to Venice, while European goods were often disposed of in Syria at a loss, but served to procure the indispensable complement of cash for his purchases of cotton.²⁷ Dumping, in this instance, was doubtless encouraged by Venice's domination of the spice and cotton trade in the late Middle Ages, which enabled it to market these commodities in Europe at monopolistic prices.

With respect to the "invisibles" in the European balance of payments, the expenses of pilgrims and other western travelers certainly weighed heavily on the scales in the negative sense. Two Florentine pilgrims, for example, sailed from Venice in 1384 for Egypt and the Holy Land with the very considerable sum of 900 gold ducats in their purses.²⁸ Or again, in 1392, the English mayor of Bordeaux and six companions disbursed almost 500 ducats on the same pilgrimage, including the price of their round-trip fare but not counting "certain minor expenses for food and souvenirs."²⁹ In 1480 the expenses of ninety pilgrims in Felix Faber's company were reckoned at 100 florins per head, plus 50 florins in case of sickness or accident.³⁰ In the thirteenth century, the Hospitalers of St. John organized an annual pilgrimage from Marseilles of some three thousand persons, and in the fourteenth to fifteenth centuries two or three pilgrim galleys sailed from Venice every year for Jaffa, the port of Jerusalem.³¹ This medieval tourist traffic was essentially one-way. With the exception of high-ranking diplomatic or ecclesiastical personalities, oriental visitors were practically unknown in Europe. Not only that, the Muslims of the Maghreb, Spain, and the western Sudan set out in the same direction on their pilgrimage to Mecca. The enormous quantity of Sudanese gold that the emperor of Mali, Musa Mansa, and his suite disbursed during his pilgrimage in 1324 depressed the price of gold in Cairo, it was said, for the next twelve years.³²

A final source of unbalance were the military expenses occasioned by the crusades and the campaigns of western naval powers in the eastern Mediterranean. Only the ephemeral fruits of victory, particularly at the time of the First and the Fourth Crusades, helped to compensate for the enormous waste of resources in the cause of the True Faith and the quest for commercial advantage.³³ The situation worsened as time

²⁷ Lane, *Andrea Barbarigo*, 67ff, 101ff, 112.

²⁸ L. Frescobaldi and L. Sigoli, *Viaggi in Terrasanta*, ed. C. Angelini (Florence, 1944), 47.

²⁹ P. E. Riant, ed., "Voyage en Terre Sainte d'un maire de Bordeaux au XIV^e siècle (1392)," *AOL* 2 (1884): 378–88.

³⁰ Felix Faber, *Le voyage de la sainte cyte de Hierusalem, 1480*, ed. C. Schefer (Paris, 1882), xxxiv–xxxvii.

³¹ M. Mollat, "Problèmes navals de l'histoire des Croisades," *CahCM* 10 (1967); F. C. Lane, *Navires et constructeurs à Venise pendant la Renaissance* (Paris, 1965), 246.

³² J. Couq, *Recueil des sources arabes concernant l'Afrique occidentale du VIII^e au XVI^e siècle* (Paris, 1975), 278–79.

³³ It was once believed that the booty seized from the Muslims during the First Crusade provided the capital for the "takeoff" of the Levant trade. Mention was made, in particular, of the capture and sack of Caesarea in 1101 by 8,000 Genoese soldiers and sailors. After deducting 15% for the shipowners and premiums for the officers, each Crusader's share came to 48 Byzantine gold solidi and two pounds of pepper, a small fortune. Cf. V. Vitale, *Breviario della storia di Genova* (Genoa, 1955), 22–23; Heyd, *Commerce du Levant*, 1:137, 163ff; E. Perroy, *Les Croisades et l'Orient latin, 1095–1204* (Paris, n.d.),

went on. "The more the perils mounted against the Crusader states," writes Michel Mollat, "the more urgent it became to supply them by the cheapest and shortest route—the sea—with the aid the East refused: men, horses, war machines, provisions; the Frankish states depended on Roman Christendom for almost everything."³⁴

In the case of other "invisibles," Europe was in a creditor position vis-à-vis the Near East. Western merchants and shippers by the end of the crusading period dominated maritime trade in the eastern Mediterranean and the Black Sea, also because the Muslims, if not the Greeks, "had lost the shipbuilding art" (Ibn Khaldun).³⁵ It was the Genoese who organized the slave trade from the Crimea to Mamluk Egypt, the trade in timber from Asia Minor to Egypt, the trade in Cypriot textiles in Turkey and Syria. The Venetians exported wine, olive oil, and dried fruits from Greece to Egypt and returned with wheat, beans, and sugar, but their biggest customer in intraregional trade was Constantinople itself. After 1261, the restored capital of what remained of the Byzantine Empire was supplied with grain by Genoese merchants trading in the Black Sea, the preserve of Italian commerce until the arrival of the Turks. It was Venice's successful insertion into this network of eastern exchange, thanks to a long series of treaties beginning in 1082 according unrestricted access to the markets of the empire, that made its fortune. In fact, it was not until the discovery of rich new silver mines at Kutna Hora in Bohemia in the closing years of the thirteenth century that it became possible to finance the essential needs of Venetian trade with the East from the Rialto.³⁶

The Italians also exploited numerous economic concessions in former Greek lands including their own eastern colonies: the alum mines of Phokaia, the sugar plantations on Cyprus, the vineyards on Crete. On Chios the Genoese controlled the trade in mastic, most of which was destined for the Levantine markets. Latin merchants financed the soap and coral industries on Rhodes and the coral and camelot ("camelotti") industries on Cyprus. Insofar as the profits realized in these various enterprises were repatriated in the form of goods, by letter of exchange, or, rarely, in specie, they helped to redress the balance, but without ever reversing the situation in favor of the West.

To judge from the accounts of the Venetian merchant Giacomo Badoer, active at Constantinople in 1436–39, European trade with the Romania in the late Middle Ages was less out of balance than trade with the Mamluk sultanate, except perhaps during the papal embargo of the fourteenth century with the emergence of alternative non-Muslim spice markets in that region. Badoer imported expensive manufactured goods

206ff; C. Cahen, "Orient latin et commerce du Levant," *Bulletin de la Faculté de lettres de Strasbourg* (1951): 328–46.

³⁴ Mollat, "Problèmes navals."

³⁵ Cited by Ashtor, *Levant Trade*, 9; Cf. A. E. Laiou, "Byzantine Traders and Seafarers," in *The Greeks and the Sea*, ed. Sp. Vryonis, Jr. (New Rochelle, N.Y., 1993), 79–96.

³⁶ F. C. Lane, *Venice: A Maritime Republic* (Baltimore, Md., 1973), 69, 79, 134; A. E. Laiou, "The Byzantine Economy in the Mediterranean Trade System: Thirteenth–Fifteenth Centuries," in Laiou, *Gender, Society and Economic Life in Byzantium* (Hampshire, 1992), 177–223.

such as woolens, cottons, silks, and Venetian glassware, as well as bulk merchandise such as tin, lead, iron, copper, wine, and olive oil. He exported or reexported to the West nonluxuries from Greece, the Balkans, and the Black Sea. But exports also included raw silk and some spices (in 1395 alone, Venetian merchants exported 175,000 ducats worth of silk), and imports included small quantities of silver to balance accounts. Profits realized in intraregional trade, including trade with the Turks and the lands of the sultan, helped to finance his purchases for export to Venice. In Badoer's accounts, as one would expect in the light of the foregoing, it is more common to find bills of exchange drawn on Constantinople at Venice (at a cost of 7–10%) than bills drawn on Venice at Constantinople.³⁷

One wonders if, in the last analysis, the colonial expansion of the Italian merchant republics in the eastern Mediterranean was not inspired above all by their eagerness to acquire the monetary means to participate in the lucrative import trade in oriental luxuries. This challenge to their initiative and daring would also help to explain the practical business sense or, if one prefers, “capitalist spirit” developed by the Latin merchants engaged in trade with the Levant, which inevitably left its mark on other sectors of medieval trade.³⁸

³⁷ Luzzatto, *Storia economica di Venezia*, 172–79.

³⁸ The European balance of trade with the Levant remained passive, as noted, in the 15th century, notwithstanding the increase and diversification of western exports, and even in the 16th and 17th centuries, despite the opening of the cape route to the riches of the East. Cf. U. Tucci, “Entre Orient et Occident: L'âge vénitien des épices,” in *L'histoire à Nice* (Nice, 1980), 3:117–27.

Prices and Wages in the Byzantine World

Cécile Morrisson and Jean-Claude Cheynet

Although G. Ostrogorsky's pioneering work has been supplemented by that of H. Antoniadès-Bibicou, E. Patlagean, and J. Irmscher, as well as by our own research for *Hommes et richesses*, the time for presenting detailed results is not yet ripe. The sources, which grow more numerous from the thirteenth century on, must still be thoroughly investigated.¹ As it is, we have space here for no more than a selection of the data that we have gathered. Accordingly, we have merely dipped into Badoer, to whom we shall return in a forthcoming volume of *Réalités byzantines*.

We have supplemented our previous findings by adding a few items and some data about commodities (wine) and objects (luxury clothing and precious objects) not previously examined. As is well known, our information about units of measurement² and the nature of the coins referred to in documents is not certain. However, the orders of magnitude given below do possess a certain coherence, though economists and even economic historians of the later Middle Ages in the West will deem them very disparate and unreliable. Aware as we are of the inadequacies of our documentation, we have restricted ourselves to a few, very cautious, comments.

Agricultural Prices

Land and Wheat

We have deliberately omitted transactions concluded in circumstances that prevented the free operation of the market (e.g., contracts between partners of unequal status) and cases involving klasmatic land, which has been discussed by others.³ On the other

This chapter was translated by Sarah Hanbury Tenison.

¹ On prices, see G. Ostrogorsky, "Löhne und Preise in Byzanz," *BZ* 32 (1932): 292–333; H. Antoniadès-Bibicou, "Démographie, salaires et prix au XI^e siècle," *Annales ESC* 27 (1972): 215–46; E. Patlagean, *Pauvreté économique et pauvreté sociale, 4^e–7^e siècle* (Paris, 1977); J. Irmscher, "Einiges über Preise und Löhne im frühen Byzanz," in *Studien zum 8. und 9. Jahrhundert in Byzanz*, ed. H. Köpstein and F. Winkelmann (Berlin, 1983), 23–33.

² This is why we have not used figures concerning arable land and vineyards expressed in *stremmata*, the more so in that the contemporary data expressed in *modioi* are sufficient.

³ N. Oikonomides, "Das Verfalland im 10.–11. Jahrhundert: Verkauf und Besteuerung," *FM* 7 (1986): 161–68.

Table 1
Monetary Equivalencies

Date	Unit	Value
before 1092	1 dinar	1 nomisma
1092–1204	1 hyperpyron	$\frac{4}{5}$ nomisma
after 1092	1 trachy	$\frac{1}{3}$ hyperpyron
ca. 1190	1 Saracen besant	$\frac{5}{6}$ hyperpyron
after 1250	1 gold ducat	1 hyperpyron
after 1250	1 silver grosso (or ducat)	$\frac{1}{12}$ hyperpyron
after 1250	1 pound of grossi	10 hyperpyra
after 1250	1 exagion	$\frac{1}{6}$ hyperpyron
after 1250	1 uncia of ducats	1 hyperpyron
ca. 1300	1 asper barichatus	$\frac{1}{17}$ hyperpyron
ca. 1315	1 asper comnenatus	$\frac{1}{14}$ hyperpyron
ca. 1315	1 white besant	$\frac{1}{5}$ hyperpyron
after 1328	1 gold ducat	24 silver grossi
after 1350	1 gold ducat	2 hyperpyra
ca. 1375	1 asper barichatus	$\frac{1}{9}$ hyperpyron
ca. 1375	1 asper comnenatus	$\frac{1}{6}$ hyperpyron
ca. 1400	1 liter of small denarii	$\frac{1}{2}$ hyperpyron
ca. 1400	14 Ottoman aspri	1 hyperpyron
	1 ducat	3 hyperpyra

Table 2
Intrinsic Values for the Byzantine Gold Coin of Constantinople (Average Rates)

Date	% (Gold)	Carats*	Index*
6th–9th centuries	98	23½	103
late 10th century	95	23	100
mid-11th century	80	19¼	84
1071	70	17	73
1078	50	12	52
1085	12	3	12
12th century	82	20	86
mid-13th century	73	17½	76
1261–82	65	15½	68
1282–94	59	14¼	62
1294–1303	56	13½	58
1303–53	47	11½	49

continued

Table 2
(continued)

Value of the silver hyperpyron (hyperpyron of account)**

Date	1 hyperpyron = ducat	Index*
1367	0.5	49
1382–91	0.4	39
1397–1411	0.30 (official exchange rate)	29
1413–20	0.26 (for the galleys)	25
1432–52	0.33 to 0.28 (various data from account books, including <i>Badoer</i>)	32 to 27

Sources: Bertelè-Morrisson, *Numismatique byzantine*; C. Morrisson et al., *L'or monnayé*, vol. 1 (Paris, 1985).

*approximate value

**1367: 2 stavrata of ca. 8.5 g silver represented the value of a gold hyperpyron of 1353 of 1.9 g fine gold and 1 gold (or “silver”) hyperpyron of the years 1350–60 = ca. 2 ducats. The later values have been “deflated” by taking account of the rate of exchange of the “silver” hyperpyron in Venetian gold ducats, whose weight and title were stable.

Table 3
Measures**Volume**

Aggeion = 7 xestai (Casson, 5)

Amphora (measure of wine) 601 liters (Schilbach, *Metrologie*, 144)

Artaba = 4.5 modii italici = 38.78 liters

The value of the artaba in modioi is disputed, and various rates have been proposed, from 2 or less (Schilbach, *Metrologie*; Kaplan; and Irmscher), to 2½ (Bagnall, *Currency* = 2½ modioi = slightly more than 30 kg; Rathbone: “almost 40 l.”) to 3½ (cf. comments by J. Gascou, “La table budgétaire d’Antaeopolis [*P. Freer* 08.45 c–d],” in *Hommes et richesses*, 1: 286–87).

Laina = 5.6 liters

Metron (measure of wine) (thalassion) (= 30 pound) 10.25 liters (Schilbach, *Metrologie*, 112–13)

Metron (measure of oil) (thalassion) 9.1 liters (Schilbach, *Metrologie*, 116–17)

Metron (early Byzantine Egypt) ca. 10 xestai according to Casson, 8 according to texts from the Arab period = 5 xestai according to Jördens in *SB XVI* 12488 (cf. *PHeid* V, p. 111, n. 2)

Mistato = measure (of wine or oil)

Modios (thalassios) (40 liters) 12.8 kg = 17.084 liters (Schilbach, *Metrologie*, 95)

Large modios (politikos “Handelsmodios”) ca. 322.3 liters = 18 modioi thalassioi

Mouzourion = a modios

continued

Table 3
(continued)

Pinakion = a quarter modios

Sextarius (setier, xestes) ca. 0.55 liter

Values for the vaselo and the vegeta still elude us.

Area

Aroura 2,523.34 or 2,760 m² (Schilbach, *Metrologie*, 77 or Rathbone)

Table 4
The Price of Land

Date	Place	Area (in modioi)	Price	Price per Unit of Area	Source
Tenth–Eleventh Centuries					
942	Hierissos	1,000	33 nomismata	$\frac{1}{33}$ nomisma	<i>Iviron</i> , 1: no. 4 ⁴
1007	Chalkidike	12	6 nomismata	$\frac{1}{2}$ nomisma	<i>Iviron</i> , 1: no. 13
1010	Chalkidike	—	1 hyperpyron	$\frac{1}{3}$ nomisma	<i>Iviron</i> , 1: no. 16
1056	Macedonia	8	10 hyperpyra	>1 hyperpyron	<i>Dionysiou</i> , no. 1 ⁵
Thirteenth Century					
1207	Miletos	20	7 nomismata	$\frac{1}{3}$ nomisma	MM 6:152
1213	Miletos	26	13 nomismata	$\frac{1}{2}$ nomisma	MM 6:159
1213	Miletos	22	11 nomisma trikephala	$\frac{1}{2}$ nomisma	MM 6:161
1213	Miletos	8	1 hyperpyron	$\frac{1}{8}$ nomisma	MM 6:63
1213	Miletos	9	6 nomisma trikephala	$\frac{2}{3}$ nomisma	MM 6:164
1225	Smyrna	4	4 hyperpyra	1 nomisma	MM 4:191
1233	Smyrna	$2\frac{1}{8}$	$2\frac{1}{12}$ hyperpyra	1 hyperpyron	MM 4:198
1236	Miletos	12	2 hyperpyra	$\frac{1}{6}$ hyperpyron	MM 6:187
1240	Smyrna	2	$2\frac{1}{4}$ hyperpyra	$1\frac{1}{8}$ hyperpyra	MM 4:195–96
1247	Philadelphia	20	4 hyperpyra	$\frac{1}{5}$ hyperpyron	<i>Vatopédi</i> , 1: no.15
1247	Philadelphia	100	20 hyperpyra	$\frac{1}{5}$ hyperpyron	<i>Vatopédi</i> , 1: no.15
1250	Smyrna	2	$1\frac{1}{2}$ hyperpyra	$\frac{3}{4}$ hyperpyron	MM 4:205

continued

⁴ This land had originally been klasmatic and had been acquired by the monastery of Kolovou. The act, dated 942, concerns the sale of half the land, that is, 1,000 modioi, by Kolovou to the peasants of Hierissos, at a very low price, which is probably explained by the abundance of available land.

⁵ This price is abnormal for fiscal reasons.

Table 4
(continued)

Date	Place	Area (in modioi)	Price	Price per Unit of Area	Source
1250	Smyrna	3½	3 hyperpyra	⅔ hyperpyron	MM 4:205
1251	Miletos	30	7 hyperpyra	¼ hyperpyron	"Xèrochôraphion," 37
1254	Smyrna	50	5 hyperpyra hexagion	⅒ hyperpyron	MM 4:152–53
1255/56	Miletos	60	8⅓ hyperpyra	⅓ hyperpyron	"Xèrochôraphion," 38
1256	Smyrna	100	11 hyperpyra	⅒ hyperpyron	MM 4:163
1273	Kotzakion	1,000	265 hyperpyra	¼ hyperpyron	<i>Iviron</i> , 3: no. 61
1290	Hierissos	5	10 hyperpyra	2 hyperpyra	<i>Lavra</i> , 2: no. 83
1290	Hierissos	4	4 hyperpyra	1 hyperpyron	<i>Lavra</i> , 2: no. 84
1290	Hierissos	20	20 hyperpyra	1 hyperpyron	<i>Lavra</i> , 2: no. 85
1290	Hierissos	4½	9½ hyperpyra	2 hyperpyra	<i>Lavra</i> , 2: no. 86
1290	Hierissos	6	5 hyperpyra	⅝ hyperpyron	<i>Lavra</i> , 2: no. 87
1290	Hierissos	3	10 hyperpyra	3⅓ hyperpyra	<i>Lavra</i> , 2: no. 88
late 13th century	Thrace?	500	18 hyperpyra	⅒ hyperpyron	<i>Lips</i> , 132 ⁶
late 13th century	Thrace?	1,400	42 hyperpyra	⅓ hyperpyron	<i>Lips</i> , 132–33
late 13th century	Thrace?	700	28 hyperpyra	⅒ hyperpyron	<i>Lips</i> , 133
Fourteenth Century					
1301	Hierissos	25	35 hyperpyra	1⅔ hyperpyra	<i>Esphigménou</i> , no. 10
1302	Hierissos	20	12 nomismata	⅔ hyperpyron	Vatopedi, unpubl.
1307	Hierissos	5½	6 hyperpyra	1 hyperpyron	Vatopedi, unpubl.
1308	Hierissos	10	14 hyperpyra	1⅔ hyperpyra	Vatopedi, unpubl.
1308	Hierissos	5	2⅗ nomismata	½ hyperpyron	Vatopedi, unpubl.
1308	Hierissos	8	4½ hyperpyra	½ hyperpyron	Vatopedi, unpubl.
1308/12	Hierissos	15	7 hyperpyra	½ hyperpyron	Vatopedi, unpubl.
1308/12	Hierissos	6	4 hyperpyra	⅔ hyperpyron	Vatopedi, unpubl.
1308/12	Hierissos	12	10½ hyperpyron	⅝ hyperpyron	Vatopedi, unpubl.
1309	Hierissos	12	5 hyperpyra	½ hyperpyron	Vatopedi, unpubl.
1309	Hierissos	13	8 hyperpyron	⅔ hyperpyron	Vatopedi, unpubl.
1309	Hierissos	7	6 hyperpyra	⅔ hyperpyron	Vatopedi, unpubl.
1311	Hierissos	20	23 hyperpyra	1 hyperpyron	Vatopedi, unpubl.
1312	Hierissos	6	6 hyperpyra	1 hyperpyron	Vatopedi, unpubl.
1312	Chalkidike	6	6 unciae*	1 hyperpyron	<i>Xèropotamou</i> , no. 16

continued

⁶ This was *exaleimmatike* (abandoned) land.

Table 4
(continued)

Date	Place	Area (in modioi)	Price	Price per Unit of Area	Source
1312	Chalkidike	7	6 unciae	$\frac{6}{7}$ hyperpyron	<i>Xèropotamou</i> , no. 16
1321	Chrysoupolis	15	15 hyperpyra	1 hyperpyron	<i>Zographou</i> , no. 19
1324	Serres	300	36 hyperpyra	$\frac{1}{9}$ hyperpyron	"Ménécée," no. 57
1325	Berroia	3	4 hyperpyra	$1\frac{1}{3}$ hyperpyra	<i>Vatopedi</i> ⁷
1325	Berroia	4	5 hyperpyra	$1\frac{1}{4}$ hyperpyra	<i>Vatopedi</i>
1325	Berroia	5	7 hyperpyra	$1\frac{2}{5}$ hyperpyra	<i>Vatopedi</i>
1325	Berroia	8	11 hyperpyra	$1\frac{1}{4}$ hyperpyra	<i>Vatopedi</i>
1325	Berroia	90	122 hyperpyra	$1\frac{1}{3}$ hyperpyra	<i>Vatopedi</i>
1325	Berroia	600	300 hyperpyra	$\frac{1}{2}$ hyperpyron	<i>Vatopedi</i>
1325	Berroia	90	66 hyperpyra	$\frac{5}{7}$ hyperpyron	<i>Vatopedi</i>
1337	Serres	—	—	$\frac{1}{3}$ hyperpyron ⁸	<i>Vatopedi</i> , unpubl.
1355	Zichna	23	12 unciae	$\frac{1}{2}$ hyperpyron	<i>Chilandar</i> , no. 142
1356	Serres	885	160 unciae	$\frac{1}{3}$ hyperpyron	"Ménécée," no. 57
1365	Serres	200	24 hyperpyra	$\frac{1}{8}$ hyperpyron	<i>Lavra</i> , 3: no. 143
1384	Thessalonike	>3,500	871 hyperpyra	$<\frac{1}{4}$ hyperpyron ⁹	<i>Docheiariou</i> , no. 49
1399	Constantinople	44	800 hyperpyra	20 hyperpyra	MM 2:304 ¹⁰
1401	Constantinople	8	160 hyperpyra	20 hyperpyra	MM 2:558

*Note: uncia: uncia of ducats.

hand, prices in times of famine or crisis that affected the entire population have been retained.

Estates and Villages There is not much information on this subject, particularly with regard to the area and quantity of the farms. During the early Byzantine period, the *Liber Pontificalis* enumerated the properties donated to the church by Emperor Constantine, along with their revenues, but did not record their value. We have distinguished between farms whose incomes were a few tens of solidi and estates that generally yielded between 100 and 300 solidi.

⁷ A document mentioning seven sales at Berroia: G. Theocharides, Μία διαθήκη και μία δίκη Βυζαντινή (Thessalonike, 1962), 17–28.

⁸ Average calculated from 110 transactions.

⁹ This price has been deduced from the accounts for the dowry of Maria Deblitzene. In the event of her husband's death, she was to receive, among other properties, lands worth 871 hyperpyra; she was given fields amounting to a total area of 3,500 modioi, along with others that were not measured.

¹⁰ In the mid-14th century, an unspecified area of wheat-growing land was sold at Constantinople for the enormous sum of 300 hyperpyra (H. Delehay, *Deux typica byzantins de l'époque des Paléologues* [Brussels, 1921], 104). This land was definitely situated within the city walls.

The later transactions involved smaller properties. In 1024 George Charzanos sold his monastery for 210 nomismata. It was built on an *agridion* that he had purchased shortly beforehand for 132 nomismata (*Lavra*, 1: no. 25). A few years later, in 1081, the domain of Platanos was sold for 24 litrai of gold to the monastery of the Amalfitans (*Lavra*, 1: no. 42). During the first half of the twelfth century, the village of Gastibelea was repurchased for 16 pounds of gold by the monastery of the Pantokrator (Petit, *Kosmosotira*, 68–69).

On reaching the age of the Palaiologoi, our knowledge is once again limited—mainly through the intermediary of the fiscal procedure for calculating the *posotes*—to the revenues produced by the estates.¹¹ In 1280–81, for instance, Emperor Michael VIII gave several villages to Mourinos: Goggyles in Paphlagonia was assessed for a *posotes* of 200 hyperpyra, Hermileia for 202 hyperpyra, Krabbata for 109 hyperpyra, and Antigoneia for 104 hyperpyra (*Docheiariou*, no. 9).

The Price of Land Land acquires value through peasant labor. This is why abandoned land lost the greater part of its value, as is demonstrated by the price of klasmatic land in the tenth century or of *exaleimmatike* land in the fourteenth century. Of the two principal factors of production, land and labor, the latter is undoubtedly the most important.¹²

Land prices appear to conform to those provided in a fiscal instruction from the mid-eleventh century, which cites 1 nomisma for first-quality land, $\frac{1}{2}$ nomisma for second-quality land (which features most frequently since this designation normally applied to arable land), and $\frac{1}{3}$ nomisma for the poorest land. In Thrace and Bithynia, economic growth certainly occurred earlier than in the country around Thessalonike, which remained exposed to Bulgarian incursions for many years, and land values must have risen sooner, though we have no documentary evidence to prove this hypothesis.

At the beginning of the fourteenth century, nominal prices more than doubled in relation to the eleventh century; when the monetary devaluation is taken into account, this corresponded to a slight rise. Thus we learn how, in Berroia in 1325, several fields (not necessarily of the first quality) cost noticeably more than 1 hyperpyron per modios. Though the peasant population had grown to peak levels, which would normally have resulted in higher prices on account of the reduced marginal productivity of labor, the actual increase remained very moderate. Once this peak had been passed, land values dropped again except in the case of small parcels of land that were purchased for exorbitant prices, undoubtedly because they were protected from enemy incursions. Thus prices recorded in Constantinople in 1399–1400 can be explained by both situation and circumstances, since Bayezid's siege of the city increased land values *intra muros*.

¹¹ One exception to note is the sale of a *zeugelateion* at Kaisaropolis for 210 hyperpyra in 1321: *Actes de Chilandar*, ed. L. Petit (= *VizVrem* 17 [1911]; repr. Amsterdam, 1975), no. 69.

¹² M. Kaplan started from a pessimistic hypothesis but reached the same conclusion. See his *Les hommes et la terre à Byzance du VI^e siècle au XI^e siècle: Propriété et exploitation du sol* (Paris, 1992), 479–80.

Table 5
Wheat Prices

Date	Place	Price	Price of a modios thalassios	Source
Fourth–Seventh Centuries				
361–362	Antioch	$\frac{1}{15}$ nomisma (largesse); $\frac{1}{10}$ or $\frac{1}{5}$ nomisma (scarcity) $\frac{1}{10}$ or $\frac{1}{5}$ nomisma (scarcity)	$\frac{1}{15}$ nomisma	Julian, <i>Misopogon</i> , 41
494	Edessa	$\frac{1}{30}$ nomisma (abundance)	$\frac{1}{30}$ nomisma	Jos. Styl., 17
541	Egypt	$\frac{1}{40}$ nomisma	$\frac{1}{40}$ nomisma	<i>PCairo Masp</i> 67320
6th century	Egypt	14 artabai = 1 nomisma	$\frac{1}{46}$ nomisma	<i>PSI</i> 46
6th century	Egypt	$3\frac{1}{2}$ artabai = 14 carats	$\frac{1}{13}$ nomisma	<i>SB VI</i> 9051 ¹³
6th century	Egypt	8–12 artabai for 1 nomisma; on average 10 artabai for 1 nomisma	$\frac{1}{26}$ – $\frac{1}{40}$ nomisma; $\frac{1}{33}$ nomisma, on average	Bagnall, <i>Currency</i> , 6
late 6th century	Egypt	1 nomisma for 2 modioi (high prices) 12 xestai for 1 nomisma	$\frac{1}{2}$ nomisma $\frac{1}{12}$ nomisma	Moschos, PG 87.3: 2941 Moschos, Latin version
late 6th century	Nessana	15 modioi for 1 nomisma 1 nomisma for 3 modioi (scarcity)	$\frac{1}{15}$ nomisma $\frac{1}{3}$ nomisma	<i>PNess</i> 64, 65, 69 <i>Vita Epiph.</i> 53 ¹⁴
655	Kherson	1 nomisma for 3 or 4 modioi (scarcity)	$\frac{1}{3}$ to $\frac{1}{4}$ nomisma	PL 87:203
Eighth–Eleventh Centuries				
766/767	Constantinople	60 modioi, 1 nomisma	$\frac{1}{60}$ nomisma	Nikephoros, 160 ¹⁵
867–886	Constantinople	2 medimnoi, 1 nomisma (crisis)	$\frac{1}{2}$ nomisma	Syklitzes, 278
Basil I 960	Constantinople	12 medimnoi, 1 nomisma 4 modioi	$\frac{1}{12}$ nomisma ¹⁶ $\frac{1}{4}$ nomisma	Syklitzes, 278 Sym. Mag., 759

continued

¹³ See commentary by N. Kruit, *Tyche* 9 (1994): 81.

¹⁴ Cited in a review of J. Durliat, *De la ville antique à la ville byzantine: Le problème des subsistances* (Rome, 1990), by R. Delmaire, *Antiquité tardive* 1 (1993): 257.

¹⁵ *Nikephoros, Patriarch of Constantinople, Short History*, ed. C. Mango (Washington, D.C., 1990), 160. According to this chronicler, the low price was a consequence of the deflation caused by imperial hoarding, but one sector of public opinion thought that the low price was due to the fertility of the soil and the abundant harvest. In the 8th century, in Iraq, wheat was sold for the equivalent of $\frac{1}{65}$ nomisma per modios. E. Ashtor, *Histoire des prix et des salaires dans l'Orient médiéval* (Paris, 1969), 42–43). The explanation for this low price could be a shortage of coin.

¹⁶ In 878, when the Arabs were besieging Syracuse, 1 modios of wheat was worth 150 nomismata. *ODB*, s.v. “Theodosios the Monk,” 2053).

Table 5
(continued)

Date	Place	Price	Price of a modios thalassios	Source
960	Constantinople	8 modioi	$\frac{1}{8}$ nomisma (normal price)	Sym. Mag., 759
ca. 963	Constantinople	load for 2 mules, 1 nomisma	$\frac{1}{15}$ nomisma	Skylitzes, 278
968–969	Constantinople	light load for one man (3 to 4 modioi), 2 nomismata ¹⁷	$\frac{1}{2}$ or $\frac{2}{3}$ nomisma (crisis prices)	Skylitzes, 278
968	Constantinople	1 gold piece not sufficient for 2 measurements of Pavia	(crisis prices)	Liutprand, <i>Legatio</i> , chap. 44
968	Constantinople	3 coins not sufficient for meals for 25 companions and 4 guards		Liutprand, <i>Legatio</i> , chap. 34
late 10th century	Syria	2 or 3 modioi, 1 nomisma ¹⁸	$\frac{1}{2}$ to 1 nomisma	Ouranos, <i>TM</i> , 296–97
Eleventh Century				
1073	Miletos	12 modioi, 1 nomisma	$\frac{1}{12}$ nomisma	<i>Patmos</i> , 2:20
before 1075	Rhaidestos	18 modioi or 1 nomisma	$\frac{1}{8}$ – $\frac{1}{18}$ nomismata	Attaleiates, 203 ¹⁹
1076	Rhaidestos	1 modios, 1 nomisma (crisis)	1 nomisma	Attaleiates, 203
ca. 1076	Constantinople	1 modios, less 1 pinakion, 1 nomisma	1.33 nomismata	Skyl. Cont. 162
1077/78	Constantinople	1 medimnos, 3 nomismata (crisis)	3 nomismata	Attaleiates, 258
Twelfth Century				
ca. 1101	Melitene	1 modios, 1 dinar (famine)	ca. 1 nomisma	Michael the Syrian, 189
ca. 1170	Constantinople	1 modios of quality, 1 trachy	$\frac{1}{3}$ hyperpyron	<i>Iviron</i> , 2:10
1161	Crete	700 modioi, 2 litrai of nomismata trikephala ²⁰	$\frac{1}{5}$ hyperpyron	<i>Patmos</i> , 1: no. 22

continued

¹⁷ When questioned by Nikephoros Phokas, an old man on active military service replied that he could easily carry on his shoulders the quantity of wheat that 1 nomisma could buy, whereas previously this had required two mules (amounting to around 15 modioi, given that one mule could carry around 7.5 modioi). See E. Schilbach, *Byzantinische Metrologie* (Munich, 1970), 170.

¹⁸ These are high prices, which even climbed to 1 nomisma per modios.

¹⁹ Commenting on these prices is tricky; see *Hommes et richesses dans l'Empire byzantin*, 2 vols. (Paris, 1989–91), 2:361–63.

²⁰ On the difficulties involved in identifying trikephala nomismata, cf. T. Bertelè and C. Morrisson, *Numismatique byzantine* (Wetteren, 1978), 105–6; in this instance, we think that it is a case of the hyperpyron, worth $\frac{4}{5}$ of the old, heavier, nomisma; if it had been the electrum coin worth $\frac{1}{3}$ hyperpyron, the price of a modios of wheat would have been $\frac{1}{15}$ hyperpyron.

Table 5
(continued)

Date	Place	Price	Price of a modios thalassios	Source
Thirteenth Century				
1227	Dyrrachion	1 staio, 25 solidi	$\frac{1}{7}$ – $\frac{1}{8}$ hyperpyron	Ducellier ²¹
1265	empire	1 kentanarion wheat, < 50 hyperpyra	$< \frac{1}{36}$ hyperpyron? ²²	MM 3:81
1271	Crete ²³	10 mouzouria, 1 hyperpyron of Crete	$\frac{1}{10}$ hyperpyron	Scardon
1277	empire	100 modioi, < 100 hyperpyra	$< \frac{1}{18}$ hyperpyron ²⁴	MM 3:92
1278	Constantinople	$\frac{3}{4}$ modios, 1 hyperpyron	$\frac{1}{13}$ hyperpyron ²⁵	Tafel and Thomas, 3:172
1278–81	Crete	1 mouzourion	$\frac{1}{8}$ – $\frac{1}{6}$ hyperpyron	Marcello
1282–84	Venice	1 staio of wheat from Crete or the Romania transported to Venice	ca. $\frac{1}{4}$ – $\frac{1}{3}$ hyperpyron	Thiriet, <i>Délibérations</i> , 1:42–46
1289–90	Kaffa	1 modios, 16 asperi barichati	$\frac{1}{18}$ hyperpyron	Balard, <i>Outre-mer</i> , 1: nos. 335, 419
1289–90	Trebizond	1 modios, 20 or 22 aspra comnenata	$\frac{1}{9}$ hyperpyron	Balard, <i>Outre-mer</i> , 1: nos. 417, 430
1290–94	Stremula	1 modios, 1 hyperpyron 14 carats	$\frac{1}{12}$ hyperpyron	Bertolotto, 526
1290–94	Scrimula	300 modioi, 1,700 hyperpyra	$\frac{1}{14}$ hyperpyron	Bertolotto, 516
1290–94	Rhaideustos	2,000 modioi, 1,800 hyperpyra	$\frac{1}{20}$ hyperpyron	Bertolotto, 511

continued

²¹ A. Ducellier, *La façade maritime de l'Albanie au Moyen Age: Durazzo et Valona* (Thessalonike, 1981), 277. This was the maximum price at which the Venetians were authorized to purchase wheat in Dyrrachion. In 1281, prices had increased; a staio of barley was worth 29 solidi.

²² The treaty concluded between Michael VIII and Venice allowed the Venetians to export grain freely as long as the price of 1 centenarium did not exceed 50 hyperpyra in Constantinople.

²³ On fluctuation in wheat prices in Crete, see the comprehensive work by D. Tsougarakis, “Η σιτική πολιτική της Βενετίας στην Κρήτη τὸν 13ο–14ο αἰώνα,” *Μεσαιωνικά καὶ νέα Ἑλληνικά* 3 (1995): 333–85.

²⁴ This relates to the renewal in 1277 (and again in 1310) of the treaty with Venice. Several points were modified in 1277. The particular reference to the price in the capital was dropped, the measure was no longer expressed in kentenaria (but in modioi), and the price limit was raised to 100 hyperpyra.

²⁵ This price (*modius unus minus quarta ad hyperpyronum*, or 1.33 hyperpyra per large modios) is cited as normal by a Venetian trader operating in the Black Sea. He regrets the fact that the emperor has forced him to sell his wheat in the capital at $1\frac{1}{4}$ modios per nomisma.

Table 5
(continued)

Date	Place	Price	Price of a modios thalassios	Source
1291/92	Venice	1 staio of wheat from Thrace or the Black Sea transported to Venice	$\frac{1}{4}$ – $\frac{1}{3}$ hyperpyron	Thiriet, <i>Délibérations</i> , 1:62–64
1292	Crete	100 mouzouria, 15½ then 16 hyperpyron	ca. $\frac{1}{6}$ hyperpyron	Thiriet, <i>Délibérations</i> , 1:66
1296	Cyprus	1 modios, 1 besant	$\frac{1}{13}$ hyperpyron	Richard ²⁶
1299	Venice	1 staio from the Romania delivered to Venice, 18 grossi	$\frac{1}{3}$ hyperpyron	Thiriet, <i>Délibérations</i> , 1:76
Fourteenth Century				
early 14th century?	Constantinople	5,000 large political modioi, 20,000 hyperpyra	$\frac{2}{9}$ hyperpyron	<i>Diegesis</i>
early 14th century?	Constantinople	1 political modios, 1 hyperpyron, 9 carats	$\frac{1}{13}$ hyperpyron	Vogel ²⁷
early 14th century?	abroad	1 political mod., 2 hyperpyra, 2 carats	$\frac{1}{6}$ hyperpyron	Vogel
1300	Crete	1 mouzourion	$\frac{1}{8}$ – $\frac{1}{6}$ hyperpyron	<i>Pizolo</i> , nos. 112, 115
1301	Crete	100 mouzouria, 16 hyperpyra, instead of 17	$>\frac{1}{6}$ hyperpyron	Thiriet, <i>Délibérations</i> , 1: no. 7
1301–2	Crete	1 mouzourion	$\frac{1}{6}$ hyperpyron	<i>Brixano</i> , nos. 89, 239
1303	Ragusa	1 staio, 1 hyperpyron	ca. $\frac{1}{5}$ hyperpyron	Krekić, no. 72
1303	Ragusa	1 staio, 14 grossi	$<\frac{1}{4}$ hyperpyron	Krekić, no. 73
1307	Crete	100 mouzouria, 16 hyperpyra	$\frac{1}{6}$ – $\frac{1}{7}$ hyperpyron	Borsari, <i>Creta</i> , 81–82
1312	Ragusa	1 staio, 14 grossi	$<\frac{1}{4}$ hyperpyron	Borsari, <i>Creta</i> , 93
1317	Negroponte	1 staio, 30 grossi (scarcity)	$\frac{1}{2}$ hyperpyron	Thiriet, <i>Délibérations</i> , 1: no. 379
1317	Crete	100 mouzouria, 16 hyperpyron	$<\frac{1}{6}$ hyperpyron	Thiriet, <i>Délibérations</i> , 1: no. 381

continued

²⁶ J. Richard, "L'ordonnance de décembre 1296 sur le prix du pain à Chypre," *Επετηρίς* 1 (1967–68): 45–51, repr. in idem, *Orient et Occident au Moyen Age: Contacts et relations, XIVe–XVe siècles* (London, 1976), art. 20. The Cyprus modios was equal to 40 litrai. In this case, the price is the one that was considered normal. When the harvest was bad, the price could increase fourfold, meaning that it could reach the equivalent of $\frac{1}{3}$ hyperpyron per modios.

²⁷ K. Vogel, *Ein byzantinisches Rechenbuch des frühen 14. Jahrhunderts* (Vienna, 1968), 70. We do not know where these transactions are supposed to have taken place. The text stipulates that when wheat is sold in a foreign country, the price is higher: 2 hyperpyra 2 carats per modios.

Table 5
(continued)

Date	Place	Price	Price of a modios thalassios	Source
1320	Philadelphia	1 large modios, 1 drachma (silver piece)	$\frac{1}{48}$ hyperpyron? (low price) ²⁸	Gregoras, 3:362
1322/27	Venice	1 staio, 12 to 13½ grossi (wheat from Thrace, Macedonia, and the Black Sea)	ca. $\frac{1}{5}$ hyperpyron	Thiriet, <i>Délibérations</i> , 1: nos. 434, 440, 447, 456
1324	Ragusa	1 staio, 18 grossi (penury)?	$\frac{1}{3}$ hyperpyron	Krekić, no. 120
1335	Spinarizza ²⁹	100 staia, 20 hyperpyra	$\frac{1}{25}$ hyperpyron	Krekić, no. 171
1339	Ragusa	1 staio, 26 grossi	$>\frac{1}{3}$ hyperpyron	Krekić, no. 186
1339	Crete	11,112 mouzouria, 2,000 hyperpyra	$\frac{2}{11}$ hyperpyron	Thiriet, <i>Régestes</i> , no. 85
1341	Constantinople	50 modioi of Pera, 6 florins 9 grossi (= ca. 13½ hyperpyra)	$\frac{1}{66}$ hyperpyron (aberration)?	Belgrano, 939 ³⁰
1343	Constantinople	1 modios, 5 hyperpyra	$>\frac{1}{4}$ hyperpyron ³¹	Zachariadou, "Céréales," 303
1344	Crete	4 mouzouria, 1 hyperpyron	$\frac{1}{4}$ hyperpyron	Zachariadou, "Céréales," 303
1345–55	Serbia	1 modios, 1 hyperpyron	$\frac{1}{18}$ hyperpyron	Novaković ³²
1346	Ragusa	1 staio, 20 grossi	$\frac{1}{3}$ hyperpyron	Krekić, no. 214
1346–47	Romania	1 modios, 8 or 9 hyperpyra	$<\frac{1}{2}$ hyperpyron	Zucchello ³³
1347	Romania	1 modios, 5 or 6 hyperpyra	ca. $\frac{1}{3}$ hyperpyron	Zucchello
1347	Palatia	1½ modioi, 1 florin	ca. $\frac{1}{3}$ hyperpyron	Zucchello
1347	Crete	100 mouzouria, 25 hyperpyra (minimum prices for wheat and barley)	$\frac{1}{4}$ hyperpyron	Thiriet, <i>Délibérations</i> , 1: no. 534

continued

²⁸ Interpreting the term *drachma* is a tricky business. Was it a coin from neighboring emirates, or the Byzantine silver piece called *basilikon*, which was worth $\frac{1}{12}$ hyperpyron? We prefer the latter theory because, although isolated, Philadelphia had maintained its links with the empire. We have assumed that the modios referred to was the modios of Palatia (60 litrai), because the price would otherwise have been inexplicably low.

²⁹ Spinarizza was situated in present-day Albania and remained in Byzantine hands for a long time. The region was said to be wheat producing.

³⁰ L. T. Belgrano, *Atti della Società ligure di storia patria* 13 (1877–84).

³¹ Entries for wheat prices between 1343 and 1405, with no references to sources, have been taken from E. A. Zachariadou, "Prix et marchés des céréales en Roumanie (1343–1403)," *Nuova rivista storica* 61 (1977): 292–306.

³² S. Novaković, "Le prix normal du blé à Constantinople pendant le Moyen Age et le Code de Stephan Dušan, empereur des Serbes," *Archiv für slavische Philologie* 27 (1905): 173–74.

³³ R. Morozzo della Rocca, *Lettere di mercanti a Pignol Zucchello, 1336–1350* (Venice, 1957), 73.

Table 5
(continued)

Date	Place	Price	Price of a modios thalassios	Source
1352	Crete	1 mouzourion	$\frac{1}{5}$ hyperpyron	<i>Zacharia de Fredo</i> , no. 1
1355	Turkey	16,000 modioi, 1,200 hyperpyra	$\frac{1}{13}$ hyperpyron	Thiriet, <i>Délibérations</i> , 1: no. 285
1360	Kilia	10 modioi, 1 sommo	$\frac{1}{16}$ hyperpyron	Balard, <i>TM</i> , 40
1361	Crete	100 mouzouria, 27 hyperpyra	$> \frac{1}{4}$ hyperpyron	Thiriet, <i>Délibérations</i> , 1: no. 282
1366	Constantinople	1 modios, 6 hyperpyra, 18 carats	$\frac{3}{8}$ hyperpyron	Santschi ³⁴
1366	Constantinople	1 modios, 4½ hyperpyra (inferior quality)	$\frac{1}{4}$ hyperpyron	Santschi
1366	Constantinople	1 modioi, 4 hyperpyra (rotten wheat)	$> \frac{1}{5}$ hyperpyron	Santschi
1384	Crete	100 mouzouria, 26 hyperpyra	$> \frac{1}{4}$ hyperpyron	Thiriet, <i>Régestes</i> , 1: no. 674
1385	Crete	100 mouzouria, 40 hyperpyra	$\frac{2}{5}$ hyperpyron	Thiriet, <i>Régestes</i> , 1: no. 705
1390	Panidos	1 modios, 6 or 7 hyperpyra	$> \frac{1}{4}$ hyperpyron	<i>Italiens à Byzance</i> , 40
1390	Constantinople	1 modios, > 20 hyperpyra (penury)	> 1.1 hyperpyra	Doukas, 85
1397	Crete	100 mouzouria, 35 hyperpyra	$\frac{1}{3}$ hyperpyra	Thiriet, <i>Régestes</i> , 1: no. 937
1398	Romania	200 modioi, 6¾ ducats	ca. 1 hyperpyron	Gioffrè ³⁵
1399	Crete	100 mouzouria, 35 hyperpyra	$> \frac{1}{3}$ hyperpyron	Thiriet, <i>Régestes</i> , 1: no. 965
Fifteenth Century				
1400	Constantinople	8 mouzouria, 10 hyperpyra (penury)	$1\frac{1}{4}$ hyperpyra	MM 2:474, 482
1401	Romania	1 modios, 24 hyperpyra	1.33 hyperpyra	Zachariadou, "Céréales," 303
1401	Kaffa	1 modios, 100 asperi barichati	$> \frac{1}{4}$ hyperpyron	Zachariadou, "Céréales," 303

continued

³⁴ These figures are derived from E. Santschi, "Quelques remarques sur le change et le pouvoir d'achat des monnaies à Byzance pendant la crise économique du XIIIe au XVe siècle et dans l'Orient latin durant la même période" (diss., Université de Lausanne, 1963), 37. These high prices were accepted by Amadeus of Savoy, who was not fully aware of the real situation in the empire.

³⁵ D. Gioffrè, "Atti rogati in Chio nella seconda metà del XIV secolo," *Bulletin de l'Institut historique belge de Rome* 34 (1962): 401–3. This wheat was purchased by the governor of Chios to safeguard the island's provisions.

Table 5
(continued)

Date	Place	Price	Price of a modios thalassios	Source
1402	Constantinople	1 modios, 31 hyperpyra	$1\frac{3}{4}$ hyperpyra	Balard, <i>Romanie</i> , 758
1402	Pera	1 modios, 8 hyperpyron	$< \frac{1}{2}$ hyperpyron	
1402	Constantinople	1 modios, 7 or 8 hyperpyra	$\frac{2}{5}$ hyperpyron	
1409	Korone	1 staio, 4 pounds of small denarii	$> \frac{1}{2}$ hyperpyron	Thiriet, <i>Régestes</i> , 2: no. 1338
1412	Crete	1 mouzourion, 10–11 solidi	$\frac{1}{3}$ hyperpyron	Thiriet, <i>Régestes</i> , 2: no. 1441
1414	Crete	100 mouzouria, 38 hyperpyra	$> \frac{2}{5}$ hyperpyron	Thiriet, <i>Régestes</i> , 2: no. 1551
1420	Crete	100 mouzouria, 45 hyperpyra	$> \frac{1}{2}$ hyperpyron ³⁶	Thiriet, <i>Régestes</i> , 1: no. 1786
1436	Constantinople	140 modioi = 875 hyperpyra [1 = $6\frac{1}{4}$ h]	$\frac{1}{3}$ hyperpyron	Badoer, 103, 17
1436	Constantinople	4–6 hyperpyra for 1 modios	$\frac{1}{4}$ – $\frac{3}{8}$ hyperpyron	Badoer, 108, 4
1436	Constantinople	6 hyperpyra for 1 modios	$\frac{1}{3}$ hyperpyron	Badoer, 108, 4
1437	Amisos	85 aspra for 1 modios	$\frac{1}{4}$ hyperpyron	Badoer, 306, 12
1444	Pera	8 hyperpyra for 1 modios	$\frac{4}{9}$ hyperpyron	Roccatagliata, 1: no. 16

*Note: From 1213 on, the term *modios* designated the modios politikos, except in Pera.

Table 6
Prices for Barley and Other Cereals

Barley prices and wheat prices were generally in the ratio of 3:2. See below for prices in Constantinople during the tenth century and in Crete.³⁷

Date	Place	Price	Price of a modios thalassios	Source
after 430	Egypt	1 artaba, 2 carats	$\frac{1}{36}$ solidus	Bagnall, <i>Currency</i> , 65
6th–7th centuries	Egypt	11 artabai, $\frac{1}{3}$ solidus	$\frac{1}{100}$ solidus	<i>PHeid</i> V, 359

continued

³⁶ The text states that from then on the Cretan hyperpyron was worth $\frac{1}{4}$ ducat instead of $\frac{1}{2}$ or $\frac{1}{3}$ ducat.

³⁷ The ratio (5:3) is almost identical in Diocletian's Edict on Prices. In Egypt, it was probably 2:1. R. Bagnall, *Currency and Inflation in Fourth-Century Egypt* (Atlanta, 1985).

Table 6
(continued)

Date	Place	Price	Price of a modios thalassios	Source
743	Constantinople	1 modios, 12 nomismata (siege)	12 nomismata	Theophanes, 1:419–20
766–767	Constantinople	70 modioi barley, 1 nomismata	$\frac{1}{70}$ nomisma	Nikephoros, 160
960	Constantinople	6 modioi, 1 nomisma (penury)	$\frac{1}{6}$ nomisma	Sym. Mag., 759 ³⁸
before 964	province	30 modioi, 1 nomisma	$\frac{1}{30}$ nomisma	<i>Epistoliers</i> , 146
early 12th century	Chalkidike	2 modioi, 2 drakhani	$\frac{1}{3}$ hyperpyron	<i>Iviron</i> , 2: app. 2: 29
1271	Crete	60 measures, 4 hyperpyra	$\frac{1}{15}$ hyperpyron	Scardon, no. 85
1271	Crete	30 measures, 2 hyperpyra	$\frac{1}{15}$ hyperpyron	Scardon, no. 158
1271	Crete	100 measures oats, 5 hyperpyra	$\frac{1}{20}$ hyperpyron	Scardon, no. 342
1290	Kaffa	millet	$\frac{1}{30}$ hyperpyron	Balard, <i>Outre-mer</i> , 1: no. 505
1290–94	Stremula	1 modios barley, 1 hyperpyron	$\frac{1}{18}$ hyperpyron	Bertolotto, 526
1307	Crete	100 measures, 7 hyperpyra	$\frac{1}{14}$ hyperpyron	Brixano, no. 13
1307	Crete	30 measures, 2 hyperpyra	$\frac{1}{15}$ hyperpyron	Brixano, no. 49
1307	Crete	100 mouzouria barley, 10 hyperpyra	$\frac{1}{10}$ hyperpyron	Borsari, <i>Creta</i> , 81–82
1330	Peloponnese	1 modios barley and millet, 4 grossi	$> \frac{1}{7}$ hyperpyron	Krekic, no. 151
1367	Crete	4 measures, 1 hyperpyron ³⁹	$\frac{1}{4}$ hyperpyron	Santschi, <i>Mémoires</i> , no. 274
1408	Pera	50 modioi, 200 hyperpyra	$\frac{2}{9}$ hyperpyron	Roccatagliata, 1: no. 2
1439	Constantinople	$6\frac{1}{2}$ modioi, $40\frac{1}{2}$ hyperpyra	$\frac{1}{3}$ hyperpyron	Badoer, 604, 21
1439	Constantinople	$5\frac{1}{2}$ modioi, 28 hyperpyra	$\frac{5}{18}$ hyperpyron	Badoer, 716, 7

Bread For the early Byzantine period, all we know is the annual price of “political bread”: 4 nomismata in 578, according to John of Ephesos, and 3 nomismata in 618, according to the *Paschal Chronicle* (either $\frac{1}{90}$ or $\frac{1}{120}$ nomisma per day). When we take the gold:copper ratio for those two dates into account, this daily ration, estimated at ca. 1 kg of second-quality bread (Durliat, 61–63), was equivalent to 5–8 folles, as indirectly confirmed by the *Paschal Chronicle* (p. 716) concerning the rise in the price of the *scholai*

³⁸ The normal price was probably 1 nomisma for 12 modioi of barley; *ibid.*

³⁹ The cost of 20,000 measures of barley for the soldiers’ horses, at the rate mentioned above, was subtracted from their pay in June.

bread from 3 to 8 folles in 625. The price of bread in the capital is not known for the later period. Our only information comes from Thessalonike: when the Normans took the town, they sold bread “that formerly was worth one obol for three bronze staters,”⁴⁰ but the weight is not recorded. If the stater was equivalent to the stamenon and the obol to the tetarteron, the increase would be about 1,200–1,800%. The normal price of 1 tetarteron for bread recorded here (let us suppose for 2 pounds a day) suggests the same rates as in Constantinople, where, according to the well-known extract from Tzetzes, a pound of bread and ten mackerel could be had for the same sum.⁴¹

The Price of Cereals Grain crises could be caused by drought, town sieges, or epidemics, resulting in abruptly escalating prices, multiplied by a factor of ten or more (as in Edessa ca. 500 and Constantinople in 1077/78), which, in turn, drastically increased the death rate.⁴² Such short-term movements apart, the rise in prices (from $\frac{1}{30}$ to $\frac{1}{12}$ solidus per modios) between the sixth and ninth centuries appears definitive, although this rise was not regular because prices seem to have been lower during the reign of Constantine V than they were in the sixth century. This rise is exaggerated by the fact that the sixth-century prices relate to the regions of production,⁴³ whereas the later prices refer to the capital. Although the extent of the possible rise cannot be estimated accurately, it may be explained by the loss of the most fertile province and perhaps by an improvement in the remuneration of peasant labor.

From the ninth to the eleventh century, wheat was normally sold in Constantinople for $\frac{1}{12}$ nomisma per modios, up to the critical period of revolts and invasions during Michael VII's reign. From the end of the eleventh century to the advent of the Palaiologoi, we possess only random data that is difficult to compare or to deflate. The few known prices for the twelfth century are hard to interpret, since the *synodikon* of Iveron refers to one gold piece (*drakhani*) for a modios without stipulating which trachy (hyperpyron or electrum coin) was involved. Likewise, we do not know whether the trikephala nomismata, which were donated to the monastery of Patmos to replace the previous gift of modioi of grain, were made of electrum, which would have reduced the price by a factor of three. Neither do we know when the large modios that was eighteen times superior to the thalassian modios was introduced. It was used in the thirteenth century, but may well have been in use during the previous century if this can be related to the development of Italian trade. According to our hypothesis of a small modios, prices would have been rising, whereas the hypothesis of an early use of the large modios would result in very reduced prices, which seems unlikely.

⁴⁰ Eustathios of Thessalonike, *La Espugnazione di Tessalonica*, ed. S. Kyriakidès (Palermo, 1961), 124.

⁴¹ John Tzetzes, *Epistulae*, ed. P. A. M. Leone (Leipzig, 1972), 81–82.

⁴² Durliat, *De la ville antique*, 407–8, 498–502; *Hommes et richesses*, 1:257. The information provided by Pseudo-Joshua the Stylite about the famine that was raging in Edessa at the beginning of the 6th century has often been commented on. A multiplication factor of above three and even higher is also observed during the siege of Constantinople in the winter of 1077/78 (without taking the creation of the *foundax* of Rhaidestos into account). During the siege of the capital by Bayezid, the price of wheat rose by a factor of three.

⁴³ Egypt in the case of the lower one and Edessa in the other.

From the end of the thirteenth century, references to prices become more numerous, and it is possible to trace their development. In Constantinople, the price of wheat was initially lower than under the Macedonians, but it then gradually increased following a trend that was paralleled at a higher level in Crete.⁴⁴ Constantinople was harder hit by crises because of its heavy dependence on the freedom of the seas, as was the case in the mid-fourteenth century, during the Genoese blockade⁴⁵ and during Bayezid I's siege ca. 1400.

What do these prices tell us about the productivity of capital invested in the cultivation of wheat during the eleventh century? A farm of 80 modioi of average quality required a capital of 40 nomismata for the land, to which must be added equipment and a pair of oxen, worth perhaps 10 nomismata. We must include the seed grain that had to be stored, ca. 50 modioi, that is, 4 nomismata. Assuming that the yield ranged from 1 to 5 and that three-eighths of the land lay fallow each year, production would have amounted to 250 modioi of wheat with a theoretical value of 20 nomismata (not taking crop failures into account). Given this margin of uncertainty, we cannot calculate the return on capital investment very precisely, but it was certainly high and in excess of 30%.⁴⁶ This is not incompatible with what we know about the charges levied on the farm. With the *pakton* set at 1 nomisma for 10 modioi of first-quality land, and thus for 20 modioi of average-quality land, the charge on a farm of 80 modioi would be 4 nomismata, equivalent to 48 modioi of wheat, that is, one-fifth of the cereal production. This levy was bearable once the farm's other resources (vineyards, orchards, gardens, etc.) are taken into account.

⁴⁴ The price of wheat doubled in Crete during the 14th century, from 16 hyperpyra per 100 measures (or modioi thalassioi) to 35 (Tsougarakis, table 6).

⁴⁵ During the blockade of the capital by the Genoese fleet, the price of wheat doubled in a few days (*Nicephori Gregorae Byzantina historia*, ed. I. Schopen and I. Bekker, 3 vols. (Bonn, 1829–55), 3:92).

⁴⁶ See J. Lefort, "The Rural Economy, Seventh–Twelfth Centuries," *EHB* 299–305, for an estimate of the possible revenue of peasant cereal exploitation.

Vineyards and Wines

Table 7
Prices for Vineyards

Date	Place	Area (modioi)	Price	Price per unit	Source
985	Macedonia ⁴⁷	90	360 nomismata	4 nomismata	<i>Iviron</i> , 1: no. 7
early 11th century	unknown	4,000 feet	72 nomismata	5–6½ nomismata ⁴⁸	<i>Peira</i> , 1: no. 18.6
1097	Macedonia	abandoned vineyard		3 nomismata	<i>Lavra</i> 1: no. 53
1142	Macedonia	3	17 hyperpyra	6½ hyperpyra	<i>Pantocrator</i> , no. 3
1193	Crete	1.5	8 nomismata trikephala	5.5 hyperpyra	MM 6:125
1250	Smyrna	1	7½ hyperpyra	7½ hyperpyra	MM 4:201
1259	Smyrna	½	3 hyperpyra	6 hyperpyra	MM 4:201
1271	Thessaly	2	15 hyperpyra	7½ hyperpyra	MM 4:404–5
1271	Thessaly	1	9 hyperpyra	9 hyperpyra	MM 4:402–3
1271	Thessaly	1	10 hyperpyra	10 hyperpyra	MM 4:400–401
1272	Thessaly	⅔	6⅔ hyperpyra	10 hyperpyra	MM 4:410–11
1283	Smyrna	2 (abandoned)	11 hyperpyra hexagion	5½ hyperpyra	MM 4:131–32
1295	Chalkidike	6	91 hyperpyra	15 hyperpyra	<i>Xèropotamou</i> , no. 12
1295	Macedonia	18	300 hyperpyra	16⅔ hyperpyra	<i>Iviron</i> , 3:67
1314	Thessalonike	5	72 hyperpyra	14½ hyperpyra	<i>Chilandar</i> , no. 28
1314	Thessalonike	5	72 hyperpyra	14½ hyperpyra	<i>Chilandar</i> , no. 29
1384	Thessalonike	14	144 hyperpyra	10 hyperpyra	<i>Docheiariou</i> , no. 49
1384	Thessalonike	14 (abandoned)	94 hyperpyra	6⅔ hyperpyra	<i>Docheiariou</i> , no. 49 ⁴⁹
1396	Thessalonike	4	100 hyperpyra	25 hyperpyra	<i>Vatopedi</i> , unpubl.

continued

⁴⁷ Once again, the examples earlier than the 12th century have been drawn from the Athonite archives. There is nothing to indicate that the vineyards of Thrace and Bithynia were not valued more highly. The fiscal surveyors were given special instructions for measuring them (*Géométries du fisc byzantin*, ed. J. Lefort et al. (Paris, 1991), 124 for Thrace, 126 for Opsikion, 128 for Chios, Katabolon, and Pythia, 170 for the Gulf of Nikomedeia).

⁴⁸ It is difficult to estimate the planted area from the number of vinestocks. The treatises of fiscal geometry explain clearly what a chillas was, but they do not all provide the same definition. The likeliest solution proposed corresponds to an area comprising between 2 modioi 32 litrai and 3 modioi 18 litrai (*Géométries*, 217).

⁴⁹ The same vineyard as before is involved, though henceforth abandoned.

Table 7
(continued)

Date	Place	Area (modioi)	Price	Price per unit	Source
1397	Constantinople	16 $\frac{2}{3}$ mouzouria	500 hyperpyra	30 hyperpyra	MM 2: 349 ⁵⁰
1400	Constantinople	3 mouzouria	120 hyperpyra	40 hyperpyra	MM 2: 558

The data are very dispersed before the Palaiologan period.⁵¹ When we exclude abandoned vineyards, prices range from 4 nomismata to 6 $\frac{1}{3}$ hyperpyra per modios.

Table 8
Wine Prices⁵²

Date	Place	Quantity	Price	Price per unit	Source
301	empire	1 xestes	30 denarii	$\frac{2}{3}$ solidus ⁵³	Diocletian, <i>Edict on Prices</i>
340	Egypt	1 xestes	1–1 $\frac{2}{3}$ talants	$\frac{1}{20}$ – $\frac{1}{30}$	Bagnall, <i>Currency</i> , 66
6th century	Egypt	1 xestes	$\frac{1}{500}$ solidus	$\frac{1}{25}$ solidus	<i>PCol</i> VIII 245
6th century	Egypt	63 angeia = 441 xestai	18 carats	$\frac{1}{32}$ solidus = $\frac{3}{4}$ carat	<i>PCairo</i> 67145
6th–7th centuries	Egypt	1,000 xestai	2 solidi–11 $\frac{1}{2}$ carats	$\frac{1}{32}$ solidus	<i>PSI</i> X 122
6th–7th centuries	Egypt	2,575 xestai	6 solidi–2 carats	$\frac{1}{21}$ solidus	<i>PMich</i> XV 743
606–608	Egypt	525 xestai	1 solidus–1 $\frac{1}{2}$ carats	$>\frac{1}{30}$ solidus	<i>SB</i> I 4505
613	Egypt	175 xestai	$\frac{1}{3}$ solidus– $\frac{1}{4}$ carat	$\frac{1}{30}$ solidus	<i>SB</i> I 4504
7th century	Egypt	220 xestai	22 $\frac{1}{2}$ carats	$\frac{1}{13}$ solidus	<i>PWisc</i> I 11

continued

⁵⁰ 16 $\frac{2}{3}$ mouzouria = modioi. This high price is explained by the date and the fact that the vineyard was close to the cistern of St. John Prodromos.

⁵¹ E. Schilbach (*Metrologie*, 254) provides some information about vineyard prices, but always using the same method—that of assuming the tax was set at $\frac{1}{24}$ of the price, which is only an indirect and uncertain indicator. Furthermore, the data supplied by the appendix of the *typikon* of Kecharitomene do not date from 1118, but from the first half of the 15th century (cf. P. Gautier, “Le typikon de la Théotokos Kécharitôménè,” *REB* 43 (1985): 148–49).

⁵² These calculations are based on an approximate rate of 20 xestai = one measure.

⁵³ First-quality wine is involved; second-quality wine was worth only $\frac{1}{3}$ solidus and the more ordinary kind $\frac{1}{6}$ solidus.

Table 8
(continued)

Date	Place	Quantity	Price	Price per unit	Source
743	Constantinople	1 xestes	$\frac{1}{2}$ nomisma (siege)	10 nomismata	Theophanes, 1:419–20
12th century	Constantinople	15 measures	10 manuelata	$\frac{1}{5}$ hyperpyron	Theodore Prodromos, v. 407 (see below, note 72)
1199	Constantinople	35 measures	9 hyperpyra, 2 keratia	$\frac{1}{4}$ hyperpyron	Müller, <i>Documenti</i> , 77b
1271	Crete	200 mistati	20 hyperpyra	$\frac{1}{10}$ hyperpyron	Scardon no. 2
1271	Crete	100 mistati	10 hyperpyra	$\frac{1}{10}$ hyperpyron	Scardon no. 5
1278/81	Crete	50 mistati	5 hyperpyra	$\frac{1}{10}$ hyperpyron	Marcello, no. 252
1278/81	Crete	400 mistati	40 hyperpyra	$\frac{1}{10}$ hyperpyron	Marcello, no. 323
1278/81	Crete	100 mistati	8 hyperpyra	$\frac{1}{12}$ hyperpyron	Marcello, no. 112
1278/81	Crete	150 mistati	12 hyperpyra	$\frac{1}{12}$ hyperpyron	Marcello, no. 350
1289	Kaffa	3 vegeti	500 asperi	10 hyperpyra	Balard, <i>Outre-mer</i> , 1:390
1289	Kaffa	23 vegeti	6,750 asperi	$17\frac{1}{4}$ hyperpyra	Balard, <i>Outre-mer</i> , 1:393
1290	Kaffa	28 vegeti	3,815 asperi	8 hyperpyra	Balard, <i>Outre-mer</i> , 1:352
1300	Crete	20 mistati	6 hyperpyra	$\frac{1}{3}$ hyperpyron	Pizolo, no. 1
1300	Crete	46 mistati	4 hyperpyra	$\frac{1}{11}$ hyperpyron	Pizolo, no. 78
1300	Crete	100 mistati	4 hyperpyra, 8 grossi	$\frac{1}{25}$ hyperpyron	Pizolo, no. 137
1300	Crete	60 mistati	5 hyperpyra	$\frac{1}{12}$ hyperpyron	Pizolo, no. 220
1300	Crete	110 mistati	9 hyperpyra	$\frac{1}{12}$ hyperpyron	Pizolo, no. 279
1300/1302	Crete	635 mistati	65 hyperpyra	$\frac{1}{10}$ hyperpyron	Brixano, no. 472
1300/1302	Crete	50 mistati	5 hyperpyra	$\frac{1}{10}$ hyperpyron	Brixano, no. 27
1300/1302	Crete	100 mistati	15 hyperpyra	$\frac{1}{6}$ hyperpyron	Brixano, no. 200
mid-14th century	Chalkidike	540 measures	180 hyperpyra	$\frac{1}{3}$ hyperpyron	Schreiner, <i>Finanz</i> , 82
1350	Constantinople	100 mistati (Triglia)	67 hyperpyra	$\frac{7}{10}$ hyperpyron	<i>Italiens à Byzance</i> , 122
1367	Crete	102 mistati ⁵⁴	25 hyperpyra	$\frac{1}{4}$ hyperpyron	Santschi, <i>Mémoriaux</i> , no. 104
1368	Crete	1,873 mistati	374 hyperpyra	$\frac{1}{5}$ hyperpyron	Santschi, <i>Crète</i> , no. 41
1372	Crete	ca. 1,500 mistati	94 hyperpyra	$\frac{1}{15}$ hyperpyron	Santschi, <i>Crète</i> , no. 276

continued

⁵⁴ Half of the wine was Malvasia. The price of barrels is known: 30 barrels of 1,200 mistati = 108 hyperpyra (1368; E. Santschi, *Régestes des arrêts civils et des mémoriaux (1363–1399) des archives de Crète* [Venice, 1976], no. 98); 100 empty barrels were worth 186 besants (1368; *ibid.*, no. 129).

Table 8
(continued)

Date	Place	Quantity	Price	Price per unit	Source
1372	Crete	100 mistati	20 hyperpyra	$\frac{1}{5}$ hyperpyron	Santschi, <i>Crète</i> , no. 735
1394	Crete	100 mistati (Malvasia)	27 hyperpyra	$\frac{1}{4}$ hyperpyron	Santschi, <i>Crète</i> , no. 1423
1394–95	Crete	100 mistati	60 hyperpyra	$\frac{3}{5}$ hyperpyron	Santschi, <i>Crète</i> , no. 1610
early 15th century	unknown	540 metra	180 hyperpyra	$\frac{1}{3}$ hyperpyron	Schreiner, <i>Finanz</i> , 82
early 15th century (?)	unknown	100 metra	670 aspra	$\frac{2}{5}$ hyperpyron	Schreiner, <i>Finanz</i> , 201
1436	Constantinople	9 mistati (Chios)	4 hyperpyra	$\frac{4}{9}$ hyperpyron	<i>Badoer</i> , 47, 21
1436	Constantinople	12 mistati (Greek wine)	6 hyperpyra	$\frac{1}{2}$ hyperpyron	<i>Badoer</i> , 82, 38
1437	Constantinople	100 mistati	45 hyperpyra	$\frac{4}{9}$ hyperpyron	<i>Badoer</i> , 199, 2
1439	Constantinople	100 mistati (Malvasia)	40 hyperpyra	$\frac{2}{5}$ hyperpyron	<i>Badoer</i> , 604, 3

Although we have no prices for vineyards during the early Byzantine period, they appear to have been stable from the end of the tenth to the end of the thirteenth century, with a tendency to rise slightly during the fourteenth century in the region of Thessalonike. This seems to have been a normal development, given the contemporary rise in wine prices and the role this metropolis played in the wine market.

The wine market depended on several factors: age, type of vine, and, above all, provenance. During the early Byzantine period, Diocletian's Edict on Prices distinguished three qualities of wine, which varied in price from 1 to 2. During the later period, the Malvasia vintage enjoyed, as might be expected, a premium of 25% or more. Indeed, any overall analysis of the evolution of wine prices must take these quality differences into account. Moreover, any comparison of prices in late antiquity with those in the Middle Ages is hampered by the long gap that extends from the seventh to the twelfth century, and even to the thirteenth, should one be trying to compare prices in different wine-producing regions.

The average price of Egyptian wine mentioned in papyri works out at $\frac{1}{500}$ solidus per xestes, that is, ca. $\frac{1}{25}$ solidus per 10 metric liters,⁵⁵ whereas by the end of the thirteenth century, Cretan wine was worth 1 hyperpyra for 10 measures. However, one cannot conclude that this constituted a price rise, given that the currency was depreciated and, especially, that the quality of the wine was very likely not the same. After

⁵⁵ L. Casson, "Wine Measures and Prices in Byzantine Egypt," *TAPA* 70 (1939): 1–16; Durliat, *De la ville antique*, 505–9.

1300, prices clearly did rise. Cretan wine tripled in price in the course of a century. In the mid-fourteenth century, the wines of Chalkidike and Bithynia (Triglia, though this appears to have been a vintage wine) were even more expensive, with the former costing $3\frac{1}{2}$ hyperpyra and the latter $6\frac{7}{10}$ hyperpyra for 10 measures. The rise was even more spectacular in the case of wine than of wheat. During the first half of the fifteenth century, prices at Constantinople remained high, between 4 and 6 hyperpyra for 10 measures, according to quality.

It is difficult to calculate the revenue from a vineyard without knowing its yield. However, one example taken from the notarial archives in Crete suggests a high gross income: John Salagari owed money to Peter Venerio, who, to repay him, sold a vineyard with a house and winepress for 550 hyperpyra. The vineyard was purchased by a third party, Signolo, for 301 hyperpyra. The latter stated that he was prepared to return the property if Salagari repaid him, once the value of the grape harvest had been deducted; this amounted to 205 hyperpyra, leaving 96 hyperpyra to be paid ($301 - 205 = 96$ hyperpyra).⁵⁶

This may not be a representative example, but we are able to make another calculation. We know from an eleventh-century document that a vineyard worth 100 nomismata produced 124 measures of wine. The price of wine at that date is not known. If we take into account the only known price prior to 1204, that of 35 measures for 9 hyperpyra 2 keratia, this works out at a production worth 32 hyperpyra, that is, at an income:capital ratio of 1:3.⁵⁷ Of course, the price listed in 1199 represents a retail price in Constantinople, and prices in the wine-producing regions were lower. However, given that the monasteries on Mount Athos had their own boats, we can see what profits they derived from their vineyards.

The gross yield of a capital investment of 100 nomismata in a vineyard is not perceptibly higher than the yield from the same capital invested in arable land, but the cultivated area was far smaller; a vineyard measuring 15–20 modioi brought in as much as 200 modioi of land sown with wheat.

⁵⁶ End of the 14th century, Santschi, *Crète*, no. 1140.

⁵⁷ Vineyard yields would need to be known. Starting from the above figures, a vineyard worth 100 nomismata would comprise an area of, at most, 15 modioi, with a production of 12 hectoliters, in other words, a yield of less than 10 hl/ha. This yield seems low compared with what we otherwise know. In *PCairo Masp* I 67104 (530), a leasing contract for a vineyard at Aphrodito for ten years stipulates an annual rent of 126 angeia of 7 xestai each per aroura. If the Italic xestes of 0.54 liters was meant, this would have corresponded to 17.3 hl/ha and if, as with other *karponia* contracts, the harvest was divided into shares of $\frac{2}{3}$ for the landowner and $\frac{1}{3}$ for the tenant, the overall yield would have been 26 hectoliters per hectare. D. Rathbone, *Economic Rationalism and Rural Society in Third Century A. D. Egypt* (Cambridge, 1991), 247 n. 51. Cf. data in A. Tchernia, *Le vin de l'Italie romaine: Essai d'histoire économique d'après les amphores* (Rome, 1986), 359–60, and R. Duncan Jones, *The Economy of the Roman Empire: Quantitative Studies*, 2d ed. (Cambridge, 1982), 44–45).

*Olive Trees and Oil*Table 9
Prices for Olive Trees⁵⁸

Date	Place	Quantity	Price	Price per unit	Source
13th century	Asia	22 olive trees	16 nomismata kaina	$\frac{2}{3}$ hyperpyron	MM 4:201
1231	Asia	18 olive trees	5 hyperpyra	$\frac{1}{3}$ – $\frac{1}{4}$ hyperpyron	MM 4:61
1232	Asia	24 olive trees	7 hyperpyra	$\frac{1}{3}$ hyperpyron	MM 4:135
1232	Asia	27 olive trees	8 nomismata hexagia	$\frac{1}{3}$ hyperpyron	MM 4:78
1247	Asia	11 olive trees	7 trikephala	$1\frac{1}{10}$ hyperpyra	<i>Vatopédi</i> , 1: no.15
1247	Asia	15 olive trees	17 trikephala	$1\frac{1}{10}$ hyperpyra	<i>Vatopédi</i> , 1: no.15
1259	Asia	11 olive trees	4 hyperpyra hexagia	$\frac{2}{5}$ hyperpyron	MM 4:133
1263	Asia	3 olive trees + field	3 hyperpyra	1 hyperpyron	MM 4:124
1274	Asia	44 olive trees	42 nomismata	1 hyperpyron	MM 4:116
1279	Asia	7 olive trees	5 hyperpyra hexagia	$\frac{5}{7}$ hyperpyron	MM 4:137
1281	Asia	40 olive trees + field	36 hyperpyra	$\frac{9}{10}$ hyperpyron	MM 4:135
1281	Asia	10 olive trees	9 hyperpyra	$\frac{9}{10}$ hyperpyron	MM 4:136
1281	Asia	14 olive trees + oaks	10 hyperpyra	$\frac{2}{3}$ hyperpyron	MM 4:122–23
1282	Asia	7 olive trees	6 hyperpyra hexagia	$\frac{6}{7}$ hyperpyron	MM 4:130

Table 10
The Price of Oil

Date	Place	Quantity	Price	Price of one measure of 10 liters	Source
?	Egypt	45 xestai	1 nomisma	$\frac{1}{2}$ nomisma	<i>POxy</i> I 1920
6th century	Egypt	1 kentenarion	4 or 5 nomismata	1 nomisma	<i>PLond</i> IV 1375
	Egypt	40 xestai	1 nomisma	$\frac{1}{2}$ nomisma	<i>POxy</i> XIV 1753
579	Egypt	33 xestai (ἐλαίον σπάνιον)	19 carats	ca. $10\frac{1}{2}$ carats	<i>POxy</i> XIV 2052

*continued*⁵⁸ Information provided in Schilbach, *Metrologie*, 260.

Table 10
(continued)

Date	Place	Quantity	Price	Price of one measure of 10 liters	Source
7th century	Egypt	80 xestai	40 carats	ca. 9 carats	<i>PBaden</i> 95
6th century	(Hermopolites)	12 xestai	6 carats	ca. 9 carats	<i>PBaden</i> 95
(according to Gascon)		43 xestai	22 carats	ca. 9 carats	<i>PBaden</i> 95
		37 xestai	12½ carats	ca. 6 carats	<i>PBaden</i> 95
743	Constantinople	5 litrai	1 nomisma (very severe siege)	18 nomismata	Theophanes 1:419
late 9th century	Constantinople	1 litra	1 obol	[1/16 nomisma] = 1½ carats	Genesios, 4:34 ⁵⁹
1201	Constantinople	34 migliaia	1,000 hyperpyra	>½ hyperpyron	Morozzo della Rocca and Lombardo, 2: no. 456
1300	Crete	1 migliaia ⁶⁰	44 hyperpyra	2/3 hyperpyron	<i>Pizolo</i> , no. 156
1300	Crete	46 vaxieli	<250 hyperpyra	unknown	<i>Pizolo</i> , no. 556
1301–1302	Crete	42 vaxieli	692 hyperpyra	unknown	<i>Brixano</i> , no. 201
1436	Constantinople	1 laina	1 hyperpyron, 10 carats	22/3 hyperpyra	<i>Badoer</i> , 79, 31
1437	Constantinople	133.5 laina (Messina)	194 hyperpyra	22/3 hyperpyra	<i>Badoer</i> , 194, 19
1438	Constantinople	49.5 laina	55 hyperpyra	12/3 hyperpyra	<i>Badoer</i> , 412, 9

Oil Oil prices were always perceptibly higher than those for wine regardless of the period and the quality under consideration.⁶¹ The lowest price in the late period would have allowed no more than 20 liters to be purchased for 1 hyperpyron, which corresponds to average prices during the early Byzantine period.⁶² An olive tree's productivity depends on its age, on the density of its plantation, and on irrigation. During antiq-

⁵⁹ An exceptionally low price. In fact, one litra at about 0.571 for one "obol," that is, a follis at 1/288 nomisma, would have meant the measure was worth 1/16 nomisma.

⁶⁰ One migliaia was worth 683 liters.

⁶¹ In Diocletian's Edict on Prices, one may find variations on the order of one to four, according to quality.

⁶² Taking the devaluation of the coinage into account, it is one of those rare products that fell in price over the long term, though the regions involved (Egypt, Crete) were very different. In Jerusalem in the 10th century, a ratl of oil (2 kg?) was worth one dirham (Ashtor, *Prix et salaires*, 248). During times of high prices, 100 kg of oil in 1382 were worth 6 dinars in Alexandria, where imported Greek oil was sold in times of scarcity for 6.5 dinars a quintar, as opposed to 7.5 for Italian oil (*ibid.*, 318).

uity, a tree provided 1–4 liters of oil per year, depending on conditions.⁶³ If we suppose that the most expensive olive trees were also the most productive, this means that an olive tree costing 1 hyperpyron could produce 4 or 5 liters of oil worth at least $\frac{1}{4}$ or $\frac{1}{5}$ hyperpyron, for an annual yield of 20–25%, an added bonus being that maintaining the trees was less labor-intensive than work in vineyards, for instance.

Livestock and Animal Produce

Table 11
The Price of Livestock

Date	Type	Price	Source
	<i>Bovidae</i> (cattle)		
10th century	cattle	3 nomismata	<i>De cer.</i> 1:695
1067	buffalo	2–3 dinars	Bianquis, <i>Syrie</i> , 585
1155/56	10 cows	1 nomisma	Kinnamos, 154 ⁶⁴
late 12th century	pair of oxen	7 hyperpyra	<i>Iviron</i> , 2:9
1271	draft ox	9 hyperpyra	MM 4:403
1271	cattle	16 hyperpyra	<i>Scardon</i> , no. 196
1271	cattle	13½ hyperpyra	<i>Scardon</i> , no. 306
1271	cattle	55 hyperpyra	<i>Scardon</i> , no. 307
1278/81	cattle	15–20 hyperpyra	<i>Marcello</i> , nos. 327, 337, 559
1290	cow about to calve	5 hyperpyra	<i>Lavra</i> , 2: no.87
1290	cow and calf	10 hyperpyra	<i>Lavra</i> , 2: no. 88
1300	cattle	16–20 hyperpyra	<i>Pizolo</i> , nos. 47, 108, 120, 121, 215, 216
early 14th century	cattle	10 hyperpyra	<i>Diegesis</i>
1321	ox	4 hyperpyra	<i>Zographou</i> , no. 19
	<i>Ovidae</i> (sheep)		
7th–8th centuries	ewe	$\frac{1}{2}$ – $\frac{1}{3}$ nomisma	<i>Plond</i> IV 1447, 1448 ⁶⁵
11th century	sheep	$\frac{1}{6}$ nomisma	Schilbach, <i>Quellen</i> , 60 ⁶⁶
11th century	lamb	$\frac{1}{10}$ nomisma	Schilbach, <i>Quellen</i> , 60
1155/56	sheep	$\frac{1}{13}$ of one cow	Kinnamos, 154
1278	sheep	$\frac{1}{2}$ hyperpyron	Tsirpanlis, 153, no. 26

continued

⁶³ Average figure, taking into account the fact that the trees produce every two years. Cf. *La production du vin et de l'huile en Méditerranée*, ed. M.-C. Amouretti and J.-P. Brun (= *BCH*, suppl., 26) (Athens, 1993), 553–54.

⁶⁴ Very low price, the result of a massive influx of animals following the spate of pillages in southern Italy.

⁶⁵ And *PLond* IV 1375.

⁶⁶ This was a fiscal estimate, which could not have been very different from the market price.

Table 11
(continued)

Date	Type	Price	Source
1278/81	sheep	$\frac{2}{5}$ hyperpyron	<i>Marcello</i> , nos. 291 and 326
1292	sheep (Constantinople)	$\frac{7}{8}$ hyperpyron	Embassy of Edward I
1292	lamb (Trebizond)	$\frac{1}{3}$ – $\frac{2}{5}$ hyperpyron	Embassy of Edward I
1300	ewe in lamb	$\frac{1}{3}$ hyperpyron	<i>Pizolo</i> , nos. 478, 623, 662
1302	ewe	$\frac{2}{5}$ hyperpyron	<i>Brixano</i> , 248 and 403
early 14th century	sheep	1 hyperpyron	<i>Diegesis</i>
early 14th century	lamb	$\frac{3}{5}$ hyperpyron	<i>Diegesis</i>
	<i>Capridae</i> (goats)		
1292	goat	8 carats	Embassy of Edward I
	<i>Porcidae</i> (pigs)		
early 5th century	pig	$\frac{1}{2}$ solidus	PL 41:841
7th–8th centuries	pig	$\frac{2}{3}$ –1 nomisma	<i>PLond</i> IV 1448, 13–33
1199	pig	2 hyperpyra, 4 keratia	Müller, <i>Documenti</i> , 78a
1292	piglet	$\frac{1}{8}$ – $\frac{1}{3}$ hyperpyron	Embassy of Edward I ⁶⁷
April 1438	pig (+ various)	$3\frac{2}{3}$ hyperpyra	<i>Badoer</i> , 280, 39
	<i>Equidae</i> (horses)		
late 4th century	horse for army	18–23 solidi	Jones ⁶⁸
4th–5th centuries	donkey	3 solidi	<i>POxy</i> 1905
6th–7th centuries	donkey	3–8 solidi	<i>POxy</i> 922
late 6th century	donkey	3 solidi	PG 87:2968
749	“horse at 60 solidi”	12 nomismata	Farfa 2: no. 24 ⁶⁹
10th century	mule	15 nomismata	<i>De cer.</i> , 1:458/459
10th century	draft horse	12 nomismata	<i>De cer.</i> , 1:458/459
early 12th century	mule	17 hyperpyra	<i>Iviron</i> , 2:7
late 12th century	mule	15 hyperpyra	<i>Iviron</i> , 2:9
early 12th century	donkey	$2\frac{1}{6}$ hyperpyra	Chomatianos, no. 84
1245	“horse at 180 aspra” [$\frac{1}{12}$ hyperpyron?]	15 hyperpyra	<i>Vazelôn</i> , no. 84

continued

⁶⁷ The only price for pork provided by Ashtor (*Prix et salaires*, 315) is $\frac{1}{2}$ ducat in 1484.

⁶⁸ A. H. M. Jones, *The Later Roman Empire, 284–602: A Social, Economic, and Administrative Survey*, 3 vols. (Oxford, 1964), 1:625–26. This was the commuted price for horses intended for the army and supplied by Numidia, the horse-breeding region.

⁶⁹ “Cavallos VI pro solidos LX et aurum coctum pensans solidos CCCXI.” If solidi struck in Rome at a title of ca. 20% at this date are intended, the value corresponds to that given in *De ceremoniis aulae byzantinae*, ed. J. J. Reiske, 2 vols. (Bonn, 1829–30).

Table 11
(continued)

Date	Type	Price	Source
1270/74	mule	>3 hyperpyra	<i>Xèroptomou</i> , no. 9
1276	warhorse	>20 hyperpyra (Crete) ⁷⁰	Thiriet, <i>Délibérations</i> , 1:38
1289	warhorse	72 hyperpyra	Thiriet, <i>Délibérations</i> , 1:58
1289	warhorse	90 hyperpyra	Thiriet, <i>Délibérations</i> , 1:58
1300	horse	20 hyperpyra	<i>Pizolo</i> , no. 428
1300	horse	25 hyperpyra	<i>Pizolo</i> , no. 522
1300	horse	33 hyperpyra	<i>Pizolo</i> , no. 534
1300/1302	packhorse	16 hyperpyra	<i>Brixano</i> , no. 75
1300/1302	horse	65–91 hyperpyra	<i>Brixano</i> , nos. 126, 157, 229
1300/1302	horse	60 hyperpyra	<i>Brixano</i> , no. 357
1321	horse	16 hyperpyra	<i>Chilandar</i> , no. 59
1321	horse	12 hyperpyra	<i>Chilandar</i> , no. 69
1384	horse	14 hyperpyra	<i>Docheiariou</i> , no. 49, 1.34
1384	<i>parhippin</i> (draft horse)	6 hyperpyra	<i>Docheiariou</i> , no. 49, 1.34
1413	warhorse	>90 hyperpyra (Crete)	Thiriet, <i>Délibérations</i> , 2:1505
1419/26	female mule	70–88 hyperpyra (Crete)	Maltézou, 341
1436	bay horse belonging to Badoer	30–40 hyperpyra	<i>Badoer</i> , 81, 17; 82, 11
1438	the same, sold	21 hyperpyra 18 carats	<i>Badoer</i> , 374, 13; 377, 2
1438	gray horse belonging to Badoer	60 hyperpyra	<i>Badoer</i> , 355, 2
1438	the same, sold with saddle, cloth, etc.	36 hyperpyra	<i>Badoer</i> , 763, 13–14

The accounts drawn up by the embassy that Edward I sent to the Ilkhan of Persia provide a few supplementary prices for poultry. When in Constantinople, the English travelers procured a hare for 3½ carats, a swan for 8 carats, a duck for 3 carats, a partridge for 2 carats, some chickens for 2½ carats each,⁷¹ and some geese for 9½ carats each. Geese were a little less expensive at Trebizond (5–8 carats).

Livestock prices developed along the same lines as other prices, with a rise at the start of the fourteenth century. Cattle were expensive, but their price also varied according to region. In Macedonia, near Thessalonike, they were cheaper than in Crete,

⁷⁰ Feudatories in Crete were not supposed to own a horse worth less than 20 hyperpyra.

⁷¹ *PLond* IV 1375 and 1414 give a price of ½₂₀ nomisma per chicken.

Table 12
Prices for Animal Products

Date	Place	Quantity	Price	Source
Meat				
301	empire	1 pound	12 denarii (1 pound = $\frac{1}{83}$ solidus)	<i>Edict on Prices</i>
after 430	Egypt	1 pound	$\frac{1}{114}$ solidi	<i>PAmst</i> I 77
May 1439	Constantinople	1 cantar of salt meat (pork)	3 hyperpyra (1 pound = $\frac{3}{100}$ hyperpyron)	<i>Badoer</i> , 324, 651, 2
Fish				
12th century	Constantinople	10–12 mackerel	1 “follis” (= tetarteron)	Tzetzes, <i>Ep.</i> 57
12th century	Constantinople	8 or 9 small tunny fish	1 follis (minimum price)	Theodore Prodrornos ⁷²
1436	Amisos	2 bote (barrels) of mackerel prior to salting or 19 <i>mieri</i> (at 1 hyperpyron 18 carats for 1 <i>miere</i>) =	33 $\frac{1}{4}$ hyperpyron + salt = 3 hyperpyra 1 carat. Wholesale price	<i>Badoer</i> , 88, 13
1437	Constantinople	1 bota of 1,170 salted mullet	purchased 16 hyperpyra 14 carats = 1 mullet \pm $\frac{1}{70}$ hyperpyron = 2 $\frac{3}{4}$ tornese	<i>Badoer</i> , 117, 2
1437	Amisos	1 bota of 6,000 salted mackerel	est. 20 hyperpyra 19 carats = 1 mackerel = $\frac{1}{288}$ hyperpyron = 2 folari	<i>Badoer</i> , 334, 13–14
Cheese				
1278/81	Crete	1,000 pounds	23 hyperpyra	<i>Marcello</i> , no. 129
1278/81	Crete	700 pounds (+ 300 pounds of wool)	19 hyperpyra	<i>Marcello</i> , no. 93
1300	Crete	1,000 pounds	17 hyperpyra	<i>Pizolo</i> , nos. 170, 332
1300	Crete	1,000 pounds	19 hyperpyra	<i>Pizolo</i> , no. 617
1301	Crete	180 pounds	2 hyperpyra	<i>Brixano</i> , no. 420
1388	Crete	100 pounds	51 hyperpyra	Santschi, <i>Mémoriaux</i> , no. 1223

continued

⁷² *Poèmes prodromiques en grec vulgaire*, ed. D.-C. Hesseling and H. Pernot (Amsterdam, 1910), 3: v. 269–72.

Table 12
(continued)

Date	Place	Quantity	Price	Source
Wool				
1300	Crete	500 pounds	6 hyperpyra 7 grossi	<i>Pizolo</i> , no. 16
1300	Crete	1,000 pounds	13 hyperpyra	<i>Pizolo</i> , no. 170
Hides, Cattle				
1281	?	200 hides	>165 hyperpyra	Bratianu, <i>Notaires</i> , no. 67
1281	?	13 hides	>10 hyperpyra	Bratianu, <i>Notaires</i> , no. 98
1289	Kaffa	100 pounds of hides	66–73 asperi	Balard, <i>Outre-mer</i> , 1: nos. 366, 367, etc.
1352	Crete	100 pounds (buffalo)	18 hyperpyra	<i>Zaccharia de Fredo</i> , no. 15
1352	Crete	100 pounds	10½ hyperpyra	<i>Zaccharia de Fredo</i> , no. 102
1352	Crete	100 pounds ⁷³	9 hyperpyra	<i>Zaccharia de Fredo</i> , no. 104
1352	Crete	100 pounds	10 hyperpyra	<i>Zaccharia de Fredo</i> , no. 111
Hides, Sheep				
1271	Crete	60 hides	4 hyperpyra	<i>Scardon</i> , no. 37
1271	Crete	50 hides	3½ hyperpyra	<i>Scardon</i> , no. 72
1271	Crete	50 lambskins	2 hyperpyra	<i>Scardon</i> , no. 140
Hides, Various				
1289	Kaffa	1,000 vair skins	2,400 asperi	Balard, <i>Outre-mer</i> , 1: nos. 53 and 132
1290	Kaffa	1 dyed goatskin	9 asperi barichati	Balard, <i>Outre-mer</i> , 1: no. 893
Silk				
1020	Italy	1 pound raw silk	2½ dinars	Guillou ⁷⁴

continued

⁷³ Given that the contract provided for delivery of 41 hides weighing 600 pounds, we deduce that one hide weighed ca. 15 pounds and was worth 1½ hyperpyra.

⁷⁴ A. Guillou, "Production and Profits in the Byzantine Province of Italy (Tenth to Eleventh Centuries): An Expanding Society," *DOP* 28 (1974): 94 n. 8, according to the Cairo Geniza documents.

Table 12
(continued)

Date	Place	Quantity	Price	Source
1289	Sougdaia	1 pound genoese	<4 hyperpyra	Balard, <i>Outre mer</i> , 1: nos. 118, 151, 152
1300	Crete	1 pound	4 hyperpyra 8 grossi	<i>Pizolo</i> , no. 296
1300	Crete	4 pounds 1 ounce	18 hyperpyra 18 grossi	<i>Pizolo</i> , no. 470
1300/1302	Crete	1 pound	3 hyperpyra 4 grossi	<i>Brixano</i> , no. 61
1300/1302	Crete	2 pounds + 1 sacco	8 hyperpyra 1 grosso	<i>Brixano</i> , no. 150
1300/1302	Crete	2 pounds	7 hyperpyra	<i>Brixano</i> , nos. 319 and 563
1352	Crete	10 pounds	55 hyperpyra	<i>Zaccharia de Fredo</i> , no. 35
1381	Peloponnese	1 pound	6 hyperpyra	Jacoby ⁷⁵
1436/37	Trebizond	1 pound "stravai" or "talani" silk	153 asperi = 4¼ hyperpyra	<i>Badoer</i> , 42, 19; 308, 29
1437	Constantinople	1 pound "lezi" silk	4½ hyperpyra	<i>Badoer</i> , 166, 36
1437	Constantinople	1 pound "talani" silk	4½ hyperpyra	<i>Badoer</i> , 166, 39

which, when we compare the natural conditions, was only normal. Sheep were worth twenty or twenty-five times less than cattle. The few pig prices from the medieval period show that these were fairly expensive animals, given that they had no use apart from being butchered. Horses were quite another matter, since their value depended on how they were used. Draft horses could be found for 10 hyperpyra or more, whereas warhorses or parade horses were worth more than 50 hyperpyra, though no prices have been found to compare with those offered by Arab amirs for exceptional horses.⁷⁶ Note that the price of warhorses in the fourth century is not perceptibly different from that for similar animals during the Palaiologan period. The accounts of Edward I's embassy in 1292 suggest that prices for provisions were lower in a small provincial town such as Trebizond than in the capital.

Conclusion

While the gross return on capital invested in agricultural enterprises seems to have been high, it is difficult to calculate the level of net revenues when we know little about the amounts invested by the peasants. However, we can say that in the thirteenth and fourteenth centuries, a Cretan who wanted to possess a pair of oxen paid the equiva-

⁷⁵ D. Jacoby, "Silk Production in the Frankish Peloponnese: The Evidence of Fourteenth-Century Surveys and Reports," in *Travellers and Officials in the Peloponnese: Descriptions, Reports, Statistics. In Honor of Sir Steven Runciman* (Monemvasia, 1994), 56.

⁷⁶ An Iraqi amir's horse was worth 1,000 dinars; Ashtor, *Prix et salaires*, 60.

lent of 150 measures of wheat (about 30 hyperpyra). When the beasts died, he recovered their hides, worth 2 hyperpyra. We also know the price of a plowshare: in 1352 Nicholas Syrianos ordered 100 plowshares (*vomerii*) from ironworkers in Candia, each to weigh between 5 and 6 pounds. Given that 100 pounds of worked iron cost as much as 14 hyperpyra 8 grossi, the price of one plowshare can be calculated as 1 hyperpyron.⁷⁷ Unfortunately, we do not know how many modioi of land this type of plowshare was capable of plowing.

Prices for Nonagricultural Products

Prices Paid for People

Table 13
Ransoms for Persons of Rank and for Common People

Persons of Rank				
Date	Person/Place	Status	Price	Source
528	Constantiolos	<i>magister militum</i>	10,000 nomismata	Malalas, 438
614–615	Palestine	“200 men and women”	12,000 nomismata (60 each)	Vie S. Jean l’Aum, §9
ca. 806	Cyprus	archbishop	2,000 dinars	<i>al-Tabari</i> , 30:262
925	Oria/Apulia	governor	5,000 dinars	Sharf ⁷⁸
998	Antioch	son of Dalassenos	6,000 dinars	Canard ⁷⁹
1014	Aleppo	Mansur b. Lulu	50,000 dinars	Bianquis, <i>Syrie</i> , 317 ⁸⁰
1032	Antioch	axiarch	500 dinars	Yahya of Antioch, PO 47:350–51
1066	Edessa	<i>doux</i> of the city	20,000 nomismata	Bar Hebraeus, 217–18
ca. 1073	Isaac Komnenos	<i>doux</i> of Antioch	thousands of nomismata	Bryennios, 155
ca. 1075	Isaac Komnenos	<i>doux</i> of Antioch	20,000 nomismata	Bryennios, 207
after 1081	G. Maurokatakalon	<i>doux</i>	40,000 hyperpyra	<i>Alexiade</i> , 2:84

continued

⁷⁷ *Zaccharia de Fredo, notaio in Candia (1352–1357)*, ed. A. Lombardo (Venice, 1968), no. 22. We also know the price of raw iron. A blacksmith who had to manufacture plowshares purchased 1,047 pounds of iron at a price of 70 hyperpyra per 100 pounds (*ibid.*, no. 44, price confirmed in no. 49 and by another Cretan document of 1368: Santschi, *Crete*, no. 70; 75 hyperpyra per 100 pounds). We note that the value added by the craftsman’s labor was twice the price of the primary materials. Furthermore, we note that a small axe for splitting wood was worth $\frac{2}{3}$ hyperpyron in 1438 (G. Badoer, *Il libro dei conti di Giacomo Badoer*, ed. U. Dorini and T. Bertelè (Rome, 1956), p. 280, 40).

⁷⁸ A. Sharf, “Shabbetai Donnolo as a Byzantine Jewish Figure,” in *Jews and Other Minorities in Byzantium* (in Hebrew) (Jerusalem, 1995), 162.

⁷⁹ M. Canard, “Les sources arabes de l’histoire byzantine aux confins des Xe et XIe siècles,” *REB* 19 (1961): 300.

⁸⁰ To this sum were added 120 pounds of silver metal (in pounds of Aleppo) and 500 items of clothing.

Table 13
(continued)

Date	Person/Place	Status	Price	Source
ca. 1100	Bohemond	prince of Antioch	100,000 besants	Albert of Aix, RHC, HOcc, 612
before 1118	C. Gabras	<i>doux</i> of Chaldia	30,000 hyperpyra	Bar Hebraeus, 249
1119	Arbantenos	<i>strategos</i> ?	15,000 besants	Orderic Vitalis ⁸¹
mid-12th century	unknown	son of a <i>wali</i>	2,000 dinars	Usāmah, trans. Hitti, 109 ⁸²
1183	Isaac Komnenos	<i>doux</i> of Cyprus	30,000 besants	Rudt de Collenberg ⁸³
1185	Eustathios	metropolitan of Thessalonike	4,000 hyperpyra	Eustathios of Thessalonike ⁸⁴
ca. 1200	M. Kamytzes	<i>doux</i>	14,400 hyperpyra	Choniates, 533
ca. 1300	Notaras	<i>sebastokrator</i>	6,050 hyperpyra	<i>Brixano</i> , no. 215
late 14th century	anonymous	son of sultan	100,000 hyperpyra	Gregoras, 3:505
2d half of 14th century	anonymous	governor of Adrianople	10,000 gold pieces	Mélikoff-Sayar, <i>Destan</i> , 105
Common People				
Date	Person/Place		Price	Source
447	prisoners redeemed from Attila		8–12 solidi	Priscos, <i>FHG</i> , 1:277
late 6th century	ransom for a monk captured in Egypt		25 nomismata	Moschos, PG 87.3:2796–97
late 6th century	ransom for 12,000 prisoners of the Avars		1 nomisma, reduced to 1/6	John of Antioch, frg. 106
966	3,000 soldiers redeemed by Sayf ad Dawla		80 dinars each	Yahya, PO 18:803
1010	man of Macedonia, prisoner of the Arabs		15 nomismata	<i>Iviron</i> , 1: no. 16
1369	3 prisoners of the Turks		25–90 ducats	Santschi, <i>Crète</i> , no. 170.

There are two quite distinct levels. Common people were redeemed in accordance with their abilities, for a few tens of gold pieces at most, in the period spanning antiquity and the end of the empire. Their price was on a par with that of slaves. Ransoms

⁸¹ Cited by P. Gautier, "L'obituaire du typicon du Pantocrator," *REB* 27 (1969): 261.

⁸² By way of comparison, the ransom for a Bedouin amounted to 50 gold pieces.

⁸³ Isaac was finally freed for twice this sum; see Rudt de Collenberg, "La Damsel de Chypre," *Byzantion* 38 (1968): 133–34; repr. in *Familles de l'Orient latin XIIe–XIVe siècle* (London, 1983), art. 1.

⁸⁴ The metropolitan found that the Normans were demanding 4,000 gold coins on the pretext that his metropolis had an income of 100 kentenaria (= 72,000 hyperpyra) (Eustathios of Thessalonike, *Espagnazione*, 108).

for high-ranking persons, however, were reckoned in thousands, even tens of thousands of gold pieces, in line with their personal wealth or their importance to the state. There appears to have been some inflation in prices from the eleventh century on, though antiquity is, admittedly, represented by only one figure.

Table 14
Prices for Slaves

Date	Place	Person	Price	Source ⁸⁵
Tenth Century				
944	empire	Russian fugitive	20 nomismata	Antoniadès-Bibicou
962	Aleppo	Arab adult male	36 nomismata	Kamal ad din ⁸⁶
962	Aleppo	Arab adult female	20 dinars	Kamal ad din
962	Aleppo	young Arab, male or female	16 dinars	Kamal ad din
before 963	empire	lost slave	>6 nomismata 4 miliaresia	Antoniadès-Bibicou
962	eastern frontier	Greek adult male	30 dinars	Antoniadès-Bibicou
962	eastern frontier	adolescent male or female	15 dinars	Antoniadès-Bibicou
before 1000	eastern frontier	Muslim prisoner	33⅓ dinars	Muqqadasi ⁸⁷
Eleventh Century				
11th century	Syria	young girl	2 dinars (abundance)	Bianquis, <i>Syrie</i> , 585
before 1050	empire	slave	20 nomismata	Peira, Zepos, <i>Jus</i> , 4:83–84
before 1059	East	slavewoman	400 nomismata	Will of Boilas
1059	Ephesos	slave	24 nomismata	Grumel ⁸⁸
Twelfth Century				
1134	southern Italy	affranchisement	13 nosmimata of Michael VII	Trinchera, 513
before 1200	empire	any slave	<1 pound of hyperpyra	Rhalles and Potles, Σύνταγμα, 2:500

continued

⁸⁵ Unless stated otherwise, references to slave prices prior to the 13th century are derived from H. Antoniadès-Bibicou, "Démographie, salaires et prix au XIe siècle," *AnnalesESC* 27 (1972): 227–29.

⁸⁶ Cited in *Leonis Diaconi Caloënsis Historiae libri X*, ed. C. B. Hase (Bonn, 1828), 393. The prices are expressed in "denarii romani," i.e., nomismata.

⁸⁷ *La meilleure répartition pour la connaissance des provinces*, trans. A. Miquel (Damascus, 1983) 209.

⁸⁸ V. Grumel, *Les registres des actes du patriarcat de Constantinople*, vol. 1.3 (Paris, 1989), no. 887.

Table 14
(continued)

Date	Place	Person	Price	Source
Thirteenth Century				
1281	Pera	slavegirl (age 10)	14 hyperpyra	Bratianu, <i>Notaires</i> , no. 69
1281	Pera	white slavewoman	31 hyperpyra	Bratianu, <i>Notaires</i> , no. 87
1281	Pera	white slave	23 hyperpyra	Bratianu, <i>Notaires</i> , no. 88
1281	Pera	slavegirl (age 12)	25 hyperpyra	Bratianu, <i>Notaires</i> , no. 100
1281	Pera	freed slave	17 hyperpyra	Bratianu, <i>Notaires</i> , no. 114
1281	Pera	slave (age 12)	28 hyperpyra	Bratianu, <i>Notaires</i> , no. 115
1281	Pera	Abkhazi slavewoman	28 hyperpyra	Bratianu, <i>Notaires</i> , no. 120
1281	Pera	white slavewoman	29 hyperpyra	Bratianu, <i>Notaires</i> , no. 126
1281	Pera	boy (age 6–7)	6 hyperpyra 12 carats	Bratianu, <i>Notaires</i> , no. 132
1281	Pera	boy (age 6–7)	20 hyperpyra	Bratianu, <i>Notaires</i> , no. 143
1281	Pera	slavegirl (age 5–6)	7 hyperpyra	Bratianu, <i>Notaires</i> , no. 144
1281	Pera	boy (age 8–9)	16 hyperpyra	Bratianu, <i>Notaires</i> , no. 148
1289/90	Kaffa	slave	25–40 hyperpyra	Balard, <i>Outre-mer</i> , 1: (average)
1297	Ragusa	slave	22 hyperpyra	Krekić, no. 49
Fourteenth Century				
1300	Crete	slavewoman	18 hyperpyra	<i>Pizolo</i> , no. 173
1300	Crete	slave	24 hyperpyra	<i>Pizolo</i> , no. 340
			(affranchisement)	
1300	Crete	slave	20 hyperpyra	<i>Pizolo</i> , no. 349
1300	Crete	2 affranchised slaves	80 and 50 hyperpyra	<i>Pizolo</i> , nos. 448, 449
1300	Crete	3 Turkish slaves	65 hyperpyra for all 3	<i>Pizolo</i> , no. 539
1300–1302	Crete	a batch	18–22 hyperpyra	<i>Brixano</i> , nos. 264–72

continued

Table 14
(continued)

Date	Place	Person	Price	Source
1317	Crete	Greek slave	11 hyperpyra	Rubió i Lluch, 107
1350	Constantinople	Tatar slavewoman	49 hyperpyra	<i>Italiens à Byzance</i> , 115
1350	Constantinople	Tatar slave	26 hyperpyra	<i>Italiens à Byzance</i> , 126
1350	Constantinople	Tatar slavewoman	60 hyperpyra	<i>Italiens à Byzance</i> , 131
1350	Constantinople	Tatar slave	36½ hyperpyra	<i>Italiens à Byzance</i> , 132
1350	Constantinople	Tatar slavewoman	63 hyperpyra	<i>Italiens à Byzance</i> , 132
1350	Constantinople	Tatar slavewoman	55 hyperpyra	<i>Italiens à Byzance</i> , 133
1350	Constantinople	slavewoman	63 hyperpyra	<i>Italiens à Byzance</i> , 135
1350	Constantinople	Tatar slavewoman	50 hyperpyra	<i>Italiens à Byzance</i> , 136
1350	Constantinople	Tatar slavewoman	45 hyperpyra	<i>Italiens à Byzance</i> , 136
1350	Constantinople	Tatar slavewoman	36 hyperpyra	<i>Italiens à Byzance</i> , 137
1350	Constantinople	Tatar slavewoman	40 hyperpyra	<i>Italiens à Byzance</i> , 137
1350	Constantinople	Tatar slavewoman	42 hyperpyra	<i>Italiens à Byzance</i> , 139
1350	Constantinople	Tatar slavewoman	32 florins	<i>Italiens à Byzance</i> , 139
1350	Constantinople	2 Tatar slavewomen	99 hyperpyra	<i>Italiens à Byzance</i> , 140
1350	Constantinople	Tartar slave	27 hyperpyra	<i>Italiens à Byzance</i> , 143
1350	Constantinople	Tatar slavegirl (age 10)	48 gold hyperpyra	Balard, <i>Outre-mer</i> , 2: no. 10
1360	Kilia	Tartar and other slave girls (aged 12–20)	24–60 hyperpyra	Balard, <i>Outre-mer</i> , 2: nos. 17, 50, 56
1360/61	Cyprus	slaves	25–30 hyperpyra	<i>Boateriis</i> (average)
1357/63	Cyprus	Turkish slave	90 besants	Richard ⁸⁹

continued

⁸⁹ J. Richard, “Les comptes du collecteur apostolique en Chypre (1357–1363),” *Ἐπετηρὶς τοῦ Κέντρου Ἐπιστημονικῶν Ἑργῶν* 13/16 (1984–87): 1–47.

Table 14
(continued)

Date	Place	Person	Price	Source
1357/63	Cyprus	Greek slave	123 besants 12 denarii	Richard
1362	Constantinople	slavewoman	70 hyperpyra	<i>Italiens à Byzance</i> , 94
1362	Constantinople	slavewoman	52 hyperpyra	<i>Italiens à Byzance</i> , 94
1362	Constantinople	slave	50 hyperpyra	<i>Italiens à Byzance</i> , 94
1381	Crete	slavewoman (average)	96 hyperpyra	Verlinden ⁹⁰
1381	Crete	slave (average)	64 hyperpyra	Verlinden
1382	Crete	slavewoman (average)	95 hyperpyra	Verlinden
1382	Crete	slave (average)	71 hyperpyra	Verlinden
1383	Crete	slavewoman (average)	95 hyperpyra	Verlinden
1383	Crete	slave (average)	90 hyperpyra	Verlinden
1390	Pera	emancipation of slavewoman	50 hyperpyra	<i>Italiens à Byzance</i> , 37
before 1400	Ragusa	slave	120–150 hyperpyra ⁹¹	Krekić, “Contributo”
Fifteenth Century				
1436/37	Constantinople	slavewoman	>100 hyperpyra	<i>Badoer</i> , 90, 13
		Abkhazi slavewoman	(91 hyperpyra)	<i>Badoer</i> , 90, 13
1436/37		slave	70–90 hyperpyra	<i>Badoer</i> , <i>passim</i>
		Tatar slave	(82 hyperpyra)	<i>Badoer</i> , 91, 6–7
		Russian slave	(88 hyperpyra 14 carats)	<i>Badoer</i> , 578, 3
		Tatar slave	(100 hyperpyra)	<i>Badoer</i> , 272, 26
1443	Pera	Tatar adult male	98 hyperpyra	Roccatagliata, 1: no. 12
1443	Pera	Greek adult male	2,200 asperi	Roccatagliata, 1: no. 53

When one takes the devaluation of the hyperpyron into account, slave prices are seen to have remained remarkably stable from the Justinianic period until the beginning of the fourteenth century. This stability was all the more remarkable in that these prices were the outcome of a real market, partly international in nature. Prices subsequently rose, particularly after 1350, perhaps due to the effect of the plague on the population, despite the pirate warfare in which Turks and Latins were actively engaged.

⁹⁰ All these references are derived from C. Verlinden, *L'esclavage dans L'Europe médiévale* (Ghent, 1977), 2:840–68.

⁹¹ B. Krekić, “Contributo allo studio degli schiavi levantini e balcanici a Venezia (1388–1398),” in *Studi in memoria di Federigo Melis*, vol. 2 (Naples, 1978).

Prices of Luxury Products

Table 15
Prices of Luxury Products and Movable Goods

Date	Type of Object	Price	Source
Clothes			
late 6th century	silk clothes	72 solidi	John of Ephesos, chap. 55, PO 19:193
early 7th century	cover	36 solidi	Vie S. Jean l'Aum., chap. 19
940	purple belts and imitations	1½, 1, and ⅔ nomismata	<i>De cer.</i> , 470 (App.)
940	silk tunics (δωδεκὰ πῶλα, δεκάλια, ἐζάλια, ἐζάηῳλα)	12–6 nomismata	<i>De cer.</i> , 1:473 and <i>Book of the Eparch</i> , chap. 8
1022	veil with silver clasp	2 gold pieces	<i>Mastaura</i> , 124
1022	one cover and one cloak	1 gold piece	<i>Mastaura</i> , 124
1022	two women's dresses	1 gold piece	<i>Mastaura</i> , 124
1022	embroidered woman's gown (?)	2 gold pieces	<i>Mastaura</i> , 124
1057	coat presented to the abbey of Farfa	100 pounds of silver	Guillou, 109 ⁹²
	<i>scaramangion</i> embroidered with gold thread	20 nomismata	Petrucci, <i>Codice diplomatico</i> , no. 79
1199	gray surcoat	6⅔ hyperpyra	Müller, <i>Documenti</i> , 77a
1199	<i>fustano</i> (one or several?) for squires	4 hyperpyra 20 carats	Müller, <i>Documenti</i> , 77b
early 13th century	3 silk caftans	72 hyperpyra	Chomatianos, no. 19
early 13th century	a τζόχα	50 hyperpyra	Chomatianos, no. 19
early 13th century	saffron-colored garments	10 hyperpyra	Chomatianos, no. 84
early 13th century	a coat and a saffron-colored garment	6 hyperpyra	Chomatianos, no. 84
early 13th century	a coat and a small hat	4⅙ hyperpyra	Chomatianos, no. 84
13th century	a woolen coat	several hyperpyra	Karpozilos
13th century	a coat from Trebizond with fur trimming	12 nomismata	Karpozilos
1272	Sandals (<i>kaligia</i>)	2 aspra	<i>Vazelôn</i> , no. 86, p. 50
1272	caftan	12 aspra	<i>Vazelôn</i> , no. 86, p. 50

continued

⁹² Argyros, duke of Italy, offered the abbey of Farfa a precious coat, made entirely of silk shot with gold thread (*holosericum auroque textum*) worth more than 100 pounds of very fine silver: *Il Chronicon Farfense di Gregorio di Catino*, cited in Guillou, "Production and Profits," 109.

Table 15
(continued)

Date	Type of Object	Price	Source
1292	a wolfskin pelisse	4 hyperpyra 12 carats	Embassy of Edward I
1292	a rabbitskin pelisse	2 hyperpyra	Embassy of Edward I
1292	a red fur	6 hyperpyra	Embassy of Edward I
1292	a lambskin fur	1 hyperpyron 12 carats	Embassy of Edward I
1292	4 sheets	5 hyperpyra 15 carats	Embassy of Edward I
1292	a pair of common shoes	17 carats	Embassy of Edward I
14th century	some shoes	4 ducats	Schreiner, <i>Finanz</i> , no. 3, § 136
1292	a pair of shoes for a chaplain	1 hyperpyron 15 carats	Embassy of Edward I
1292	shoes	8–22 carats	Embassy of Edward I
1292	boots for a cook	9 carats	Embassy of Edward I
1300	a <i>chlamyda</i>	14 hyperpyra	<i>Pizolo</i> , no. 258
14th century	two garments	12 ducats	Schreiner, <i>Finanz</i> , no. 3, § 136
14th century	garment (τσούπα)	40 hyperpyra	Schreiner, <i>Finanz</i> , no. 8, § 2
14th century	linen garment (καβάδης)	7 hyperpyra	Schreiner, <i>Finanz</i> , no. 8, § 2
1365	a new τσούπα and a new φουστάνη	3 hyperpyra	Ferrari, "Vatican," 265
1384	a silk φουστάνιον	6 hyperpyra	<i>Docheiariou</i> , no. 49, l. 17
1384	2 <i>roucha</i>	18 hyperpyra	<i>Docheiariou</i> , no. 49, l. 17
1394	ambassador's garment (Mistra)	50 gold ducats	Thiriet, <i>Régestes</i> , 2:77
1424	a dress (τσούπα)	10 hyperpyra	Schreiner, <i>Finanz</i> , no. 35, § 4
1436	a hat (<i>bereta negra</i>) from near Venice	6 hyperpyra	<i>Badoer</i> , 280, 9; 329, 5
1436	cloth for a coat (Badoer)	33 hyperpyra	<i>Badoer</i> , 13, 23
1436	a black coat (Bragadin)	15 hyperpyra	<i>Badoer</i> , 53, 5
1437	making a coat (Badoer)	4 hyperpyra	<i>Badoer</i> , 280, 23
1438	100 <i>panze</i> for its fur trim	8 hyperpyra	<i>Badoer</i> , 485, 25
1439	for having it lined	6 hyperpyra	<i>Badoer</i> , 716, 8–9
1437	cloth and sewing for 5 shirts for slaves	5½ hyperpyra (1 = 1½ hyperpyra)	<i>Badoer</i> , 346, 22–25
	1 shirt each at	1 hyperpyron 6 carats	<i>Badoer</i> , 346, 31

continued

Table 15
(continued)

Date	Type of Object	Price	Source
1437	14 <i>pichi</i> of cloth for 3 shirts for slaves	2 hyperpyra (1 = 1 hyperpyron)	<i>Badoer</i> , 273, 31
1437	3 <i>pelize</i> , 3 <i>sciavine</i> (jackets), 3 pairs of shoes for slaves	13 hyperpyra (for one slave = 4 $\frac{1}{3}$ hyperpyra)	<i>Badoer</i> , 272, 32
1438	1 <i>peliza</i> , 1 <i>sciavina</i> (jacket), 1 <i>bereta</i> , and 1 pair of shoes for slavegirl (age 12)	3 hyperpyra 15 carats	<i>Badoer</i> , 362, 13
1439	1 <i>sciavina</i> , 1 <i>gonela</i> , and 1 pair of shoes for slave (age 13)	2 hyperpyra 15 carats	<i>Badoer</i> , 624, 7
1453	3 coats (marten, fox)	230 hyperpyra of Pera	Roccatagliata, 1: no. 35
Household Goods ⁹³			
1022	small cauldron	1 gold piece	<i>Mastaura</i> , 124
1365	cauldron	1 hyperpyron	Ferrari, "Vatican," 265
1022	cooking pot with feet	1 gold piece	<i>Mastaura</i> , 124
1384	2 cooking pots	4 hyperpyra	<i>Docheiariou</i> , no. 49, l. 30
1292	kitchen knife	6 carats	Embassy of Edward I
1384	3 wine carafes	2 hyperpyra	<i>Docheiariou</i> , no. 49, l. 30
1384	mortar and vase	2 hyperpyra	<i>Docheiariou</i> , no. 49, l. 31
1384	one new and one worn carpet	5 and 9 hyperpyra	<i>Docheiariou</i> , no. 49, l. 31
1300–1302	featherbed	20 hyperpyra	<i>Brixano</i> , no. 449
1393	featherbed	25 hyperpyra	Santschi, <i>Crète</i> , no. 1425
14th century	bedcover	20 hyperpyra	Schreiner, <i>Finanz</i> , no. 8, § 2
15th century	2 bedcovers	28 and 26 hyperpyra	Schreiner, <i>Finanz</i> , no. 35
1365	2 covers (1 linen and silk, 1 Egyptian)	2 hyperpyra	Ferrari, "Vatican," 265
1365	2 linen sheets	2 hyperpyra	Ferrari, "Vatican," 265
1365	2 pillows	4 hyperpyra	Ferrari, "Vatican," 265
15th century	2 pillows	5 hyperpyra	Schreiner, <i>Finanz</i> , no. 35
15th century	2 pillows	12 hyperpyra	MM 2:406

continued

⁹³ For the late period, there are some documents from Frankish Cyprus containing very precise information about the furnishings and equipment in one house: J. Richard, "Guy d'Ibelin, O.P., évêque de Limassol," *BCH* 74 (1950): 108–33; idem, "Les *comptes*" (as above, note 89).

Table 15
(continued)

Date	Type of Object	Price	Source
1384	3 cotton pillows	8–18 hyperpyra	<i>Docheiariou</i> , no. 49
14th century	some bolsters (μαζελάρια)	11 ducats	Schreiner, <i>Finanz</i> , no. 34 ⁹⁴
1436	Badoer's furniture: 1 cypresswood table, 2 stools, 1 cathedra	4 hyperpyra 11 carats	<i>Badoer</i> , 45, 12
1438	cypresswood coffin	13 hyperpyra	<i>Badoer</i> , 376, 4
1436	3 <i>carpete bianche</i> (tablecloths ?)	3 hyperpyra	<i>Badoer</i> , 47, 20
Jewels and Silver Goods			
9th century	2 pairs of earrings	10 liters of gold	<i>DAI</i> , 244
1365	2 pairs of earrings and 2 rings	12 hyperpyra	Ferrari, "Vatican," 265
1384	earrings (pearls and precious stones)	48 hyperpyra	<i>Docheiariou</i> , no. 49, l. 27
1384	pendants (pearls and precious stones)	36 hyperpyra	<i>Docheiariou</i> , no. 49, ll. 26–7
15th century	4 pairs of earrings, each weighing 4 exagia	?	Schreiner, <i>Finanz</i> , no. 6, § 27
9th century	silver table decorated with gilt animals	10 liters of gold	<i>DAI</i> , 244
1022	silver bracelet	2 gold pieces	<i>Mastaura</i> , 124
1022	2 bracelets (weight 18 sicla)	2 gold pieces	<i>Mastaura</i> , 124
1098	gold bracelet weighing 2 liters and 12 exagia	?	<i>Iviron</i> , 2: no. 47
1365	silver bracelets (19 exagia)	4 hyperpyra	Ferrari, "Vatican," 265
15th century	pendants	> 150 hyperpyra	MM 2:559
1098	a medallion (<i>enkolpion</i>) of 24 exagia	?	<i>Iviron</i> , 2: no. 47
late 11th century	silver cup of 60 exagia	?	<i>Iviron</i> , 2: <i>Synodikon</i> , 7, no. 115
1096	silver cup	130 staters	<i>Alexiade</i> , 2: 220
1300	silver cup with 37 nebrates	13 hyperpyra	<i>Pizolo</i> , no. 648
1314	silver-gilt belt	8 hyperpyra	<i>Chilandar</i> , no. 27
1364	silver belt	18 hyperpyra	Santschi, <i>Crète</i> , no. 14
1366	belt	300 hyperpyra	<i>Vatopedi</i> , ed. Mošin, no. 1

continued

⁹⁴ Also to be found are silk coverlets for a price of 10–16 ducats, 4 pairs of sheets worth 16 ducats, and mattresses (στρώματα) at 10 ducats (gold or silver ?).

Table 15
(continued)

Date	Type of Object	Price	Source
1370	2 silver belts (together 49½ uncie)	> 61 hyperpyra	Santschi, <i>Crète</i> , no. 188
14th–15th centuries	belt	4 nomismata	Schreiner, <i>Finanz</i> , no. 75
15th century	“Frankish” belt	50 hyperpyra	MM 2:419
15th century	belt weighing 8 uncie (213 g)	?	Schreiner, <i>Finanz</i> , no. 6, § 27
1368	ring with diamond	40 hyperpyra	Santschi, <i>Crète</i> , no. 91
14th century	one balas ruby	1,522 hyperpyra	Thiriet, <i>Régestes</i> , 1: no. 1410 ⁹⁵
15th century	a collar	90 hyperpyra	MM 2:563
1314	2 gold rings of 4 exagia	?	<i>Chilandar</i> , no. 27
1384	6 rings	10 hyperpyra	<i>Docheiariou</i> , no. 49
15th century	2 gold rings weighing 4 exagia	?	Schreiner, <i>Finanz</i> , no. 6, § 27
14th–15th centuries	one ring	2 nomismata 19 kokkia	Schreiner, <i>Finanz</i> , no. 75
1436	5 silver spoons weighing 4 ounces 6 solidi at 28 hyperpyra per pound	10 hyperpyra 12 carats	<i>Badoer</i> , 13, 20
1436	8 silver spoons weighing 6 ounces 5 solidi at 30 hyperpyra per pound	17 hyperpyra 2 carats	<i>Badoer</i> , 44, 2
1437	2 small cups and 2 spoons	25 hyperpyra	<i>Badoer</i> , 300, 19–21
Icons and Liturgical Objects			
514–523	gold paten weighing 5 pounds ⁹⁶	360 nomismata	<i>LP</i> , 1:271 ⁹⁷

continued

⁹⁵ T. Bertelè, “I gioielli della corona bizantina dato in pegno alla Repubblica Veneta nel secolo XIV e Mastino II della Scala,” in *Studi in onore di Amintore Fanfani*, 6 vols. (Milan, 1962), 2:89–177. The crown jewels were pawned to Venice for the sum of 33,000 ducats in 1343. Constantine XI also pawned a ruby for 9,000 hyperpyra (*ibid.*, 138).

⁹⁶ Justin I presented Pope Hormisdas with a paten decorated with hyacinths, and many other precious objects.

⁹⁷ As we know, the *Liber Pontificalis* provides an impressive list of gifts presented by Constantine and his successors and various popes to the churches of Rome, thereby supplying their liturgical equipment, and also itemizes the nature and weight of the metal involved. See the commentary by M. Mundell Mango, “The Monetary Value of Silver Revetments and Objects Belonging to Churches, A.D. 300–700,” in *Ecclesiastical Silver Plate in Sixth-Century Byzantium*, ed. S. A. Boyd and M. M. Mango (Washington, D.C., 1992), 123–36.

Table 15
(continued)

Date	Type of Object	Price	Source
523–526	gold paten weighing 20 pounds	1,440 nomismata	<i>LP</i> , 1:272
523–526	gold chalice weighing 5 pounds	360 nomismata	<i>LP</i> , 1:272
625–638	revetments and chandeliers for St. Peter's	1,224 pounds of silver	<i>LP</i> , 1:323
687–701	cross (with emeralds)	20 pounds	<i>LP</i> , 1:375 ⁹⁸
687–701	gold chalice of 20 pounds	1,440 nomismata	<i>LP</i> , 1:375
1143	lamp of 20 gold pounds (Holy Sepulcher)	1,440 hyperpyra	Kinamos, 25
late 13th century	2 candlesticks	1,000 hyperpyra ⁹⁹	Delehay, <i>Typika</i> , 94–95
late 13th century	chandelier	5 pounds of silver	Delehay, <i>Typika</i> , 95
11th century	gilt icon	30 nomismata	Petrucci, <i>Codice diplomatico</i> , no. 76
early 13th century	icon	7 nomismata	Chomatianos, no. 84
1384	7 icons	2–7 hyperpyra	<i>Docheiariou</i> , no. 49
14th century	one icon at 24 uncie of ducats	24 hyperpyra	<i>Lavra</i> , 3: no. 147, l. 3
14th–15th centuries	2 icons and 4 books	78 hyperpyra	Schreiner, <i>Finanz</i> , no. 36
15th century	icon	10 hyperpyra	MM 2:504

Garments, Jewels, and Icons

We have assembled here everything of value from a couple's possessions. Our knowledge is very limited, given that there are no inventories containing estimates of goods, apart from a few documents that are more detailed: one marriage contract involving Jews of Mastaura on the Meander dated 1022; the inventory of a minor's possessions at the beginning of the thirteenth century; a dowry preserved in a Vatican manuscript; the inventory of the reconstituted dowry of a widow named Maria Deblitzene (1384), and a marriage contract from the fifteenth century. Except for the third document, which concerns the Thracian aristocracy, these sources relate to ordinary citizens.

In 1022, each item of the wife's property, her luxury vessels, dresses, veil, coverlet, rings, and earrings, was valued at between half and two gold pieces. In 1384, the possessions that reverted to Maria Deblitzene were not fundamentally different, with the

⁹⁸ The gift to St. Peter's in Rome also included a silver dais weighing 120 pounds and six silver lamps weighing 170 pounds.

⁹⁹ Two others for 500 hyperpyra.

exception of her icons. The prices given were higher than in 1022, but it is difficult to work out what corresponds to a possible price increase and what is due to the superior quality of the objects, reflecting the lady's higher social standing. We see that most of the objects that adorned Maria's home—chests, coverlets, carpets, and even the icons—were each worth less than 10 hyperpyra. Only one silk coverlet was valued, when new, at 32 hyperpyra, though, being worn, it was worth only half its original value. Jewels were more expensive, although ordinary rings were worth 1–2 hyperpyra, sometimes less. Earrings, pendants, and brooches were reckoned in tens of hyperpyra and did not lose value over time. According to the *Book of the Eparch*, a goldsmith was not allowed to acquire more than a pound of unminted gold without declaring it to the eparch.¹⁰⁰

Books also belonged within the category of precious objects and were valued most frequently at between one and ten gold pieces. One gold piece would buy the commonest Psalter, and bargains could be found for less. Intellectuals, however, were the greatest consumers and would lend each other books and copy them if they were unable to buy.¹⁰¹

Items of exceptional quality obviously commanded exceptional prices, such as parade clothing of the kind presented by Argyros, which was worth ca. 600 nomismata.¹⁰² The imperial jewels of the Palaiologoi that were pawned to the Commune of Venice included precious stones, notably balas rubies worth more than 1,000 hyperpyra. Church treasure included very valuable items, such as the altar front in Monte Cassino that was worth 36 pounds of gold in the eleventh century,¹⁰³ or the gold cross decorated with precious stones and five pieces of the True Cross that was made for Helen, mother of Milutin, and cost 3,000 hyperpyra.¹⁰⁴ Michael Attaleiates gave his foundation a more modest endowment of furnishings including two lamps weighing 2 pounds of silver (ca. 12 nomismata). The monastery of the Kecharitomene was wealthier, having been founded by Empress Irene Doukaina, and possessed chalices and patens weighing a total of 35 pounds of silver, as well as a variety of other items used in the liturgy and worth several hundred hyperpyra.¹⁰⁵ In the first half of the twelfth century, a wealthy Georgian gave the monastery of Iveron 250 tetartera derived from the sale of a gold cross. As might be expected, churches were able to acquire more expensive icons than those owned by individuals.

¹⁰⁰ J. Koder, ed., *Das Eparchenbuch Leons des Weisen* (Vienna, 1991), 2.8.

¹⁰¹ V. Kravari, "Note sur le prix des manuscrits (IXe–XVe siècle)," in *Hommes et richesses* (as above, note 19), 2:375–84 (table of known prices, 381–82; the Paris. gr. 1475 of 126 *regata* = grossi, worth 12½ hyperpyra and not 21). In any case, we would need to relate the prices to the length of the manuscripts, as Follieri has done for the manuscripts of Arethas. None of them cost more than a pound of gold, but we do not know the price of manuscripts ordered by the emperor.

¹⁰² With a gold-silver ratio of 1:12.

¹⁰³ *Chronica Monasterii Casinense*, ed. H. Hoffmann, MGH SS 7 (Hannover, 1980), 439.

¹⁰⁴ Stojanović, *Stari Srpski Zapisi i Natpisi*, no. 45. This cross was so valuable that its price was engraved on it: 2,000 hyperpyra for the relics and 1,000 hyperpyra for making the gold cross decorated with precious stones.

¹⁰⁵ Gautier, "Kécharitôménè," 155.

Conclusion on Prices

When some of the temporary or seasonal fluctuations that were sometimes significant¹⁰⁶ are excluded, it appears that many prices expressed in gold remained fairly stable from the sixth to the eleventh century and even at the beginning of the fourteenth century, the most notable being the price of land, wheat—to a lesser degree—and slaves. In Constantinople this apparent stability sometimes conceals temporary variations because the emperor, with the eparch as his intermediary, would try to maintain the apparent stability of basic food prices by modifying the quantity supplied for a given price (thus the weight of a loaf would vary according to the price of wheat).

Over and above these exceptional measures, we need to understand the mechanisms that were responsible for this enduring stability. In the case of wheat, given the importance in political terms of keeping the capital supplied, Basil I's policy clearly demonstrates his constant preoccupation with regulating the market, by opening the imperial stores in the event of a shortage to maintain the "normal" rate of $\frac{1}{12}$ nomisma per modios. This concern is also apparent in the way the state set limits on the profits that guilds were allowed to earn in the food trade, as recorded in the *Book of the Eparch*.¹⁰⁷ However, though public opinion attached great importance to the "just price" threshold, price rises were not kept wholly under control because market mechanisms tended to intervene in times of scarcity. Thus it is tempting to speculate that the production of the principal foodstuffs—as with the supply of the slave market—evolved in line with the growth in demand during this period. Though there was no marked rise in productivity, both the area of cultivated land and the volume of commercialized production increased, enabling it to meet the growing needs of a larger population.¹⁰⁸

The situation gradually changed with the advent of the thirteenth century, when the price rises observed in the case of several products coincided with the opening up of the Mediterranean market. From then on, the availability of new land for cultivation was limited. It may be concluded that the expanded trade had not been accompanied by adequate specialization and that the increase in productivity was not sufficient to meet the increased demand, from both the growing population and the developing urban centers in the East, as in the West.

Revenues

Most of our information relates to the salaries and payments that represented the main expense bearing on the state budget. Coins formed only part of these revenues; soldiers especially were paid in rations and, possibly, with a share of the booty. Thus,

¹⁰⁶ This is the situation that Psellos evoked in his version of the life of St. Auxentios (*Démonologie populaire, démonologie critique au XIe siècle, la vie inédite de S. Auxence*, ed. P. P. Ioannou [Wiesbaden, 1971], 74–75); cf. A. E. Laiou, "Exchange and Trade, Seventh–Twelfth Centuries," *EHB* 745.

¹⁰⁷ Cf. comments by A. E. Laiou, "Exchange and Trade, Seventh–Twelfth Centuries," *EHB* 735.

¹⁰⁸ Cf. Lefort, "Rural Economy," 310, and C. Morriison, "Byzantine Money: Its Production and Circulation," *EHB* 959–62.

though the tables below do not represent the entire revenues of officials, especially in the case of the military, they do offer a glimpse at the hierarchy of wages; the lacuna is due to the absence of sources between the tenth and thirteenth centuries.

Wages of Officials

Table 16
Wages and *Rogai*, Sixth–Tenth Centuries

Annual Wages in the African Prefecture, according to Justinian's Edict of 534 ¹⁰⁹	
prefect	100 pounds of gold = 7,200 solidi
<i>consiliarii</i>	20 pounds of gold = 1,440 solidi
<i>cancellarii</i>	504 solidi
officials of the <i>officium</i> of the first office	
<i>numerarius</i>	46 solidi
his second	23 solidi
the 4th–6th, individually	11.5 solidi
the 7th–10th, individually	7 solidi
other heads of office (and heads of the <i>scholae</i> of the <i>exceptores</i> and the <i>chartularii</i>)	23 solidi
heads of other <i>scholae</i>	16 or 14 solidi
<i>nomenculatorii</i> (ushers) (12)	
head	16 solidi
subordinates (11)	9 solidi
<i>mittendarii</i> (tax collectors)	
head	14 solidi
the 2d–4th	11.5 solidi
the 46 others	9 solidi
<i>singularii</i> (bodyguards)	
head	14 solidi
the 2d–4th	14 solidi
the 46 others	9 solidi
doctors (5)	
chief doctor	99 solidi
partner	70 solidi
others	35 solidi
<i>grammatici</i> (2)	70 solidi
<i>sophistae: oratores</i> (2)	70 solidi

continued

¹⁰⁹ CIC 27.

Table 16
(continued)

Military Wages in the Sixth Century

dux of Tripolitania and his men (same for *dux* of

Byzacena)	1,582 solidi
their assessors, individually	56 solidi
the <i>primicerius</i>	33 solidi
the <i>numerarius</i>	28 solidi
each of their 4 <i>ducenarii</i>	23.5 solidi
each of the 6 <i>centenarii</i>	16.5 solidi
the 8 <i>biarchii</i> and 9 <i>circitores</i>	14 solidi
each of the 11 <i>semisales</i>	11.5

Wages of Important Officials in the Sixth Century¹¹⁰

the count of Armenia	700 solidi
<i>moderator</i> of Helenopontos	720 solidi
<i>moderator</i> of Phoenice Libanesis	720 solidi (10 pounds of gold)
<i>praetor</i> of Paphlagonia	725 solidi
<i>praetor</i> of Pisidia	800 solidi
the count of Isauria	800 solidi
<i>praetor</i> of Thrace	800 solidi
<i>moderator</i> of Arabia	1,080 solidi (15 pounds of gold)
proconsul of Cappadocia	1,440 solidi (20 pounds of gold)
a governor's assessor	72 solidi (1 pound of gold)
an <i>augustalis</i> of Alexandria	2,880 solidi (40 pounds of gold) ¹¹¹

Wages of *Strategoi* in the Ninth and Tenth Centuries

<i>strategos</i> of the first category (Anatolikoi, etc.)	40 pounds of gold
<i>strategos</i> of the second category (Opsikion, etc.)	30 pounds of gold
<i>strategos</i> of the third category (Boukellarion, etc.)	20 pounds of gold
<i>strategos</i> of the last category (Seleukia, etc.)	5 pounds of gold

continued

¹¹⁰ All references are to E. Stein, *Histoire du Bas-Empire*, 2 vols. (Paris, 1949), 2:466–67.

¹¹¹ *Ibid.*, 478–79.

Table 16
(continued)

Annual <i>Rogai</i> of Soldiers of the <i>Tagmata</i> in 911 ¹¹²	
commander	144 nomismata
<i>topoteretes</i>	72 nomismata
count	36 nomismata
<i>kentarchoi</i>	24 nomismata
<i>pentekontarchos</i>	24 nomismata
<i>bandophoroi</i>	12 nomismata
<i>mandator</i>	12 nomismata
soldier	9 nomismata
Rogai of Sailors and Soldiers in 949 ¹¹³	
<i>tourmarches</i>	30 nomismata
<i>komestes kortes</i>	20 nomismata
<i>chartoularios</i> of the theme	20 nomismata
<i>domestikos</i> of the theme	20 nomismata
<i>droungarios</i>	20 nomismata
count	6 nomismata
soldier	3 nomismata
<i>naukleros</i> of the galleys	4 nomismata
sailor	3 nomismata

Alongside these payments were those attached to titles granted by the emperor, and other gratuities, notably gifts of land. Such titles were remunerative, since a simple *protospatharios* received 72 nomismata per year and a *magistratos* perhaps 16 or 20 pounds of gold (1,152 and 1,440 nomismata respectively) (*De cer.*, 696).

The soldiers and sailors of the *tagmata*, or central fleet, were distinctly better paid, as were the combatants of the Rus *tagma*, ca. 9 nomismata per person. The higher officers were well remunerated, according to rank and their theme's seniority, but they probably had to maintain a numerous following at their own expense, as was subsequently the case with the Venetian *bailo*. Our knowledge of the Byzantine military's revenues is limited due to our lack of information about the role of payments in kind (grain, clothes) and the numerous gratuities that some people received. However, it does seem clear that Byzantine soldiers were less well remunerated than their Muslim adversaries, although the actual length of a "month" of pay in Baghdad is not certain.

¹¹² These conjectural but likely figures have been established by W. Treadgold, "The Army in the Works of Constantine Porphyrogenitus," *RSBN*, n.s., 29 (1992): 106.

¹¹³ *De cer.*, 1:662.

Table 17
Levels of Pay in the Romania and in the Ottoman Empire in the 12th–15th Centuries

Date	Type of Fighter	Circumstances/ Place	Pay (hyperpyra/year)	Source
1259	soldier (<i>akrites</i>)	Asia Minor	oikonomia 40 hyperpyra	Oikonomides ¹¹⁴
1261	sailor	Asia Minor	21 hyperpyra	Oikonomides
1261	officer	Asia Minor	at least 36 hyperpyra	Oikonomides
1272	<i>stratiotes</i>	Asia Minor	24–36 hyperpyra	Oikonomides
1281	<i>crossbow man</i>	Pera	40 pounds Genoa	Bratianu, <i>Notaires</i> , no. 105
1286	<i>crossbow man</i>	Crete	120 hyperpyra	Borsari, <i>Crete</i> , 58
early 14th century	cavalryman of the great <i>allagion</i> of Thessalonike	obliged to bring 1 or 2 men	oikonomia 70–80 hyperpyra	Oikonomides
early 14th century	4 <i>stratiotai</i>	<i>pronoia</i> of 600 hyperpyra	150 hyperpyra	Vogel ¹¹⁵
1303	Catalan cavalryman	obliged to equip himself	288 hyperpyra ¹¹⁶	Oikonomides
1303	Catalan cavalryman	obliged to feed himself	144 hyperpyra	Oikonomides
1303	Catalan infantryman	as above	72 hyperpyra	Oikonomides
1342	<i>klazomenites</i> soldiers	on top of their pay	oikonomia 10–12 hyperpyra	Oikonomides
1344	mounted captain	Crete	240 hyperpyra	Thiriet, <i>Délibérations</i> , no. 508
ca. 1350	superior officers	empire	oikonomia 150–400 hyperpyra	Oikonomides
1358	plain captain	Crete	168 hyperpyra	Thiriet, <i>Délibérations</i> , no. 640
1358	mounted captain	Crete	240 hyperpyra	Thiriet, <i>Délibérations</i> , no. 640
1387	mounted sergeant	Crete	35 hyperpyra	Thiriet, <i>Régestes</i> , no. 717

continued

¹¹⁴ N. Oikonomides, "A propos des armées des premiers Paléologues et des compagnies de soldat," *TM* 8 (1981): 353–71.

¹¹⁵ K. Vogel, *Ein byzantisches Rechenbuch des frühen 14. Jahrhunderts* (Vienna, 1968), no. 32. The *stratiotai* referred to here were undoubtedly officers.

¹¹⁶ We have one reference from an earlier period dealing with military equipment. In April 1205 a Latin count undertook to pay the sum of 800 hyperpyra in Constantinople, providing as surety 10 horses, 10 saddles, 10 shields, 10 breastplates, etc.; in other words, the equipment for 10 cavalymen. Thus each of them had to spend at least this sum in order to go to war. R. Morozzo della Rocca and A. Lombardo, *Documenti del commercio veneziano nei secoli XI–XII* (Torino, 1940; repr. 1971), no. 473).

Table 17
(continued)

Date	Type of Fighter	Circumstances/ Place	Pay (hyperpyra/year)	Source
1387	officer	Crete	200 hyperpyra	Thiriet, <i>Régestes</i> , no. 723
1387	<i>crossbow man</i>	Butrinto	144 hyperpyra	Thiriet, <i>Régestes</i> , no. 730
1394	<i>crossbow man</i>	Argos	168 hyperpyra	Thiriet, <i>Régestes</i> , no. 861
1394	sergeant	Argos	96 hyperpyra	Thiriet, <i>Régestes</i> , no. 861
1394	<i>crossbow man</i>	Crete	>120 hyperpyra	Santschi, <i>Mémoriaux</i> , no. 1533
1395	head <i>crossbow man</i>	Athens	216 hyperpyra	Thiriet, <i>Régestes</i> , no. 873
late 14th century	sergeant	Pera	84 hyperpyra	Balard, <i>Romanie</i> , 446
late 14th century	sergeant	Kaffa	54 hyperpyra	Balard, <i>Romanie</i> , 446
late 14th century	specialized soldier	Chios	104 hyperpyra	Balard, <i>Romanie</i> , 446
late 14th century	specialized soldier	Kaffa	144 hyperpyra	Balard, <i>Romanie</i> , 446
1401	sailor	Crete	102 hyperpyra	Thiriet, <i>Régestes</i> , no. 1012
1401	oarsman	Crete	78 hyperpyra ¹¹⁷	Thiriet, <i>Régestes</i> , no. 1012
1404	<i>crossbow man</i>	Crete	144 hyperpyra	Thiriet, <i>Régestes</i> , no. 1166
1404	archer	Crete	108 hyperpyra	Thiriet, <i>Régestes</i> , no. 1166
1423	soldiers	Thessalonike	72 hyperpyra	Thiriet, <i>Régestes</i> , no. 1898
1425	officer	Thessalonike	21 hyperpyra	Thiriet, <i>Régestes</i> , no. 1995
1425	soldier	Thessalonike	9 hyperpyra ¹¹⁸	Thiriet, <i>Régestes</i> , no. 1995

continued

¹¹⁷ The text states that the sailors had hitherto received only 7½ hyperpyra per month and the rowers 5½, with the result that these men were fleeing to Turkey, and Crete was being depopulated.

¹¹⁸ The pay for the “gentilhomme” and the “stratiote” guarding the walls of Thessalonike are expressed in aspra, 300 and 120 for one year, respectively. We have attributed a value of 14 aspra to

Table 17
(continued)

Levels of Pay in the Ottoman Army (Late Fifteenth Century)¹¹⁹

<i>aga</i> of the janissaries	> 100 aspra/day	3,600 hyperpyra/year
ordinary <i>aga</i>	> 60 aspra/day	2,000 hyperpyra
<i>spahioglu</i>	average: 20–25 aspra/day	> 1,000 hyperpyra
<i>silihdar</i>	10–20 aspra/day	240–480 hyperpyra
<i>garib</i>	5–6 aspra/day	180 hyperpyra
janissary	3–5 aspra/day ¹²⁰	72–120 hyperpyra

After 1261, soldiers on active service in the Romania enjoyed good incomes, which appear to have been higher than those previously available to the military, although we do need to take account of the fact that benefits in kind and gifts were growing scarcer. Specialized soldiers, such as the Catalans, were much in demand, and the state was prepared to go to exorbitant lengths to recruit them. Taking their cue from the Byzantines, the Ottomans granted their élite troops comparable levels of pay. In addition to these substantial fees, the Catalans, janissaries, and others also profited from loot in an age when there was no shortage of such opportunities for acquiring wealth.¹²¹

Table 18
Examples of Civilian Wages (6th–15 Centuries)

Date	Occupation	Place	Annual Wage	Source
?	worker	Egypt	12 nomismata	Irmischer
?	worker	Egypt	6½ nomismata	?
ca. 570	stone cutter	Egypt	< 12 nomismata	<i>ROC</i> 5 (1900): 256
576	notary	Egypt	28 nomismata	SPP, 8, 970
early 7th century	water carrier	Egypt	3 nomismata	Vie S. Jean l'Aum., 345
ca. 620	shopkeeper	Constantinople	15 nomismata	<i>Doctrina Jacobi</i> , V, 20

continued

the hyperpyron (believing that we are dealing with Turkish aspra; cf. Bertelè and Morriison, *Numismatique byzantine*, 88–89.

¹¹⁹ All references in P. Schreiner, "Eine zweite Handschrift des 'Ordo Portae' und der Wegbeschreibung in das Gebiet des Uzun Hasan," *SudöstF* 41 (1981): 15–16.

¹²⁰ To this sum were added one kaftan, one coat, and 3 aspra (2 hyperpyra) to purchase a bow.

¹²¹ E. Zachariadou, "S'enrichir en Asie Mineure au XIVe siècle," in *Hommes et richesses* (as above, note 19), 2:215–24.

Table 18
(continued)

Date	Occupation	Place	Annual Wage	Source
ca. 700	<i>misthios</i>	empire	[10 nomismata] ¹²²	<i>Farmer's Law</i> , § 22, 62
709	<i>naupegos</i>	Egypt	24 nomismata	<i>PLond</i> 14, 1910
709	carpenter	Egypt	16 nomismata	<i>PLond</i> 14, 1910
709	caulker	Egypt	18 nomismata	<i>PLond</i> 14, 1910
10th century	<i>protoasekretes</i>	Constantinople	> 30 nomismata	<i>De cer.</i> , 693
10th century	notary of the <i>asekretes</i>	Constantinople	> 20 nomismata	<i>De cer.</i> , 693 ¹²³
1047	<i>nomophylax</i>	Constantinople	288 nomismata	<i>ODB</i> , 1491
1136	chief doctor	Constantinople	7½ hyperpyra + 38 modioi of grain	"Pantocrator," 101
1136	doctor	Constantinople	3–6 hyperpyra + 30 modioi	"Pantocrator," 101
1136	servant	Constantinople	6 hyperpyra + 30 modioi	"Pantocrator," 103
1136	baker	Constantinople	5 hyperpyra + 30 modioi	"Pantocrator," 103 ¹²⁴
1182–85	provincial judge ¹²⁵	?	13–26 pounds of gold	Choniates, 330 ¹²⁶
1281	doctor ¹²⁷	Pera	40 hyperpyra	Bratianu, <i>Notaires</i> , no. 31

continued

¹²² "12 folles per day." Here the annual salary is estimated by assuming 288 folles to the nomisma and a minimum 20 days per month.

¹²³ The text of *De cerimoniis* explains that the *roga* secured by the *asekretes* and his notaries was in relation to the payment they had made. This *roga* was certainly quite inferior to their real income. The *asekretes* paid 12 pounds of gold, or as much as a *protospatharios*, who obtained in return an annual income of 1 pound of gold. These notaries were probably paid for each act, as were those attached to provincial judges (novel of Constantine VII, Zepos, *Jus*, 1:228) and the private notaries in the capital. On the latter group's honoraria, see above.

¹²⁴ The foundation was comprised of numerous personnel, whose salaries and doles are stipulated, but who were not necessarily employed full-time. The numerous and substantial gratifications awarded on the occasion of solemn feast days should also be taken into account.

¹²⁵ For the purposes of comparison, let us cite the 15 to 20 dinars that a judge earned every month at the beginning of Abbasid rule, a salary that was subsequently increased. A *muwṭasib* in Baghdad received 100 dinars per month. Famous doctors, for their part, could earn as much as 1,000 dinars monthly. Ashtor, *Prix et salaires*, 65–69.

¹²⁶ Choniates gives the income of judges appointed by Andronikos I in mnai of silver coins. We have followed the conversion rates proposed in M. Hendy, *Studies in the Byzantine Monetary Economy, c. 300–1450* (Cambridge, 1985), 181.

¹²⁷ We do not know about druggists' revenues, but a Genoese man who required treatment spent 3 hyperpyra on medication in 1199. G. Müller, *Documenti sulle relazioni delle città toscane coll'Oriente critiano e coi Turchi firo all'anno MDCXXXI* (Florence, 1879), 77a.

Table 18
(continued)

Date	Occupation	Place	Annual Wage	Source
late 13th century	cook	Constantinople	10 hyperpyra	Delehay, <i>Typika</i> , 134
late 13th century	domestic servant	Constantinople	10 hyperpyra	Delehay, <i>Typika</i> , 134
late 13th century	doctor	Constantinople	16 hyperpyra	Delehay, <i>Typika</i> , 134 ¹²⁸
early 14th century	domestic servant	Constantinople?	9 or 10 hyperpyra ¹²⁹	Vogel, no. 93
1309	clerk	Crete	18 hyperpyra	Thiriet, <i>Délibérations</i> , 1: no. 1:196
1313	clerk	Crete	12 hyperpyra	Thiriet, <i>Délibérations</i> , 1: no. 1:289
1348	caulker, mason	Modon	50–65 hyperpyra	Thiriet, <i>Régestes</i> , 1: no. 209
1350	domestic servant	Constantinople	14 hyperpyra	<i>Italiens à Byzance</i> , 124–25
1351	blacksmith	Crete	150 hyperpyra	Thiriet, <i>Délibérations</i> , 1: no. 589
1351	doctor	Crete	250 hyperpyra	Thiriet, <i>Délibérations</i> , 1: no. 589
1352	construction worker	Crete	100 hyperpyra	Thiriet, <i>Délibérations</i> , 1: no. 591
1355	blacksmith	Crete	155 hyperpyra	Thiriet, <i>Délibérations</i> , 1: no. 621
1362	doctor	Crete	250 hyperpyra	Thiriet, <i>Délibérations</i> , 1: no. 689
1369	coral diver	Ragusa	4 hyperpyra/month	Krekić, no. 278
1369	coral diver	Kotor	5 hyperpyra/month ¹³⁰	Krekić, no. 278
1371	domestic servant	Ragusa	44 hyperpyra + wheat	Krekić, no. 287
1375	master stonecutter	Korone	50 hyperpyra + wheat	Thiriet, <i>Régestes</i> , 1: no. 559
1387	doctor	Corfu	200 hyperpyra	Thiriet, <i>Régestes</i> , 1: no. 730
1387	notary	Corfu	40 hyperpyra	Thiriet, <i>Régestes</i> , 1: no. 731

continued

¹²⁸ The same text informs us about the wages of the hospital staff. They varied from 14 hyperpyra (the director) to 5 (the laundress) and even 4 (*phlebotomos*).

¹²⁹ The servant received a pound in silver, which, given a gold-silver ratio of 1:12, would have been worth 6 old nomismata, or 9–10 current hyperpyra.

¹³⁰ The fisherman of Ragusa, who received 1 hyperpyron less each month than his counterpart in Kotor, was fed. This hyperpyron could thus represent the cost of feeding an adult for a month. Given that fishermen were employed during the summer months, it is not possible to estimate their annual incomes.

Table 18
(continued)

Date	Occupation	Place	Annual Wage	Source
1387	interpreter	Corfu	100 hyperpyra	Thiriet, <i>Régestes</i> , 1: no. 733
1391	doctor	Negroponte	200 hyperpyra	Thiriet, <i>Régestes</i> , 1: no. 801
1395	doctor (<i>phisicus</i>)	Corfu	260 hyperpyra	Thiriet, <i>Régestes</i> , 1: no. 890
1395	doctor (<i>chirurgicus</i>)	Corfu	100 hyperpyra	Thiriet, <i>Régestes</i> , 1: no. 890
1395	master of the works	Crete	450 hyperpyra	Thiriet, <i>Régestes</i> , 1: no. 894
1398	mason	Cerigo	44 hyperpyra + 48 modioi	Thiriet, <i>Régestes</i> , 1: no. 943
1398	carpenter	Cerigo	34 hyperpyra + 48 modioi	Thiriet, <i>Régestes</i> , 1: no. 943
1421	worker	Thessalonike	[72 hyperpyra] ¹³¹	<i>Iviron</i> , 4: no. 97
1425	doctor	galley of Thessalonike	144–192 hyperpyra	Thiriet, <i>Délibérations</i> , 2: no. 1283
1425	carpenter	galley of Thessalonike	ca. 100 hyperpyra	Thiriet, <i>Délibérations</i> , 2: no. 1283
1437	a woman to gut the fish	Constantinople	4 duchatei/day [at 240 d. per year/ca. 60 hyperpyra]	<i>Badoer</i> , 116, 6

We know the prices of a few services. In the sixth to seventh centuries, a medical consultation cost 1 tremissis, follow-up treatment cost a solidus, and a hernia operation at least 8 solidi.¹³² In 1292 a visit to the doctor cost $\frac{2}{3}$ hyperpyron.¹³³ In 1370 an abortion cost the party concerned a coat, an Alexandrian glass vase, and 5 hyperpyra.¹³⁴ In 1436 the expenses that Badoer recorded during his assistant Bragadin's illness, which lasted a month and proved fatal, included: nurse, 1 hyperpyron; barber to bleed him, $2\frac{1}{2}$ hyperpyra; burial, 10 hyperpyra 19½ carats.¹³⁵ Between 1437 and 1438, Badoer consulted a doctor three times, spending between 6 and $7\frac{1}{2}$ hyperpyra.¹³⁶

Furthermore, we know that the cost of employing the grand interpreter at the end

¹³¹ The daily salary was 4 aspra. We have calculated the annual salary over 250 working days.

¹³² V. Crisafulli and J. W. Nesbitt, *The Miracles of St. Artemios: A Collection of Miracle Stories by an Anonymous Author of Seventh-Century Byzantium* (Leiden, 1997), 32, pp. 166–67; 23, pp. 138–39; 36, pp. 166–67. See other early Byzantine sources cited by H. Evert-Kappesowa, “The Social Rank of a Physician in the Early Byzantine Empire (IVth–VIIth Centuries A.D.),” in *Byzance et les Slaves: Etudes de civilisation. Mélanges Ivan Dujčev* (Paris, 1979), 150.

¹³³ “I conti dell’ambasciata al chan di Persia nel MCCXCII,” ed. C. Desimoni, *Atti della Società ligura di storia patria* 13 (1879).

¹³⁴ M.-H. Congourdeau, “Un procès d’avortement à Byzance au 14e siècle,” *REB* 40 (1982): 105.

¹³⁵ J. Lefort, “La brève histoire du jeune Bragadin,” in *Aetos: Studies in Honour of Cyril Mango*, ed. I. Ševčenko and I. Hutter (Stuttgart, 1998), 210–19.

¹³⁶ *Badoer*, p. 82, 19; p. 82, 30; p. 376, 31.

Table 19
Incomes of Ecclesiastics

Date	Position	Place	Salary (hyperpyra/year)	Source
10th century	copy clerk		32 hyperpyra	<i>Hommes et richesses</i> , 2:379
10th century	clerk	Chalke (Constantinople)	30 hyperpyra	Papagianni, 73–74
10th century	clerk	Hagia Sophia	24–28 hyperpyra	Papagianni, 75 ¹³⁷
1077	<i>hegoumenos</i>	Constantinople	15 nomismata + 48 modioi	Attaleiates, 69
1077	monastery bursar	Constantinople	10 nomismata + 36 modioi	Attaleiates, 79
1077	monk	Constantinople	6–7 nomismata + 30 modioi	Attaleiates, 69
late 11th century	<i>hegoumenos</i>	Bachkovo	12 hyperpyra	Pakourianos, 68
early 12th century	nun	Constantinople	7 hyperpyra + food	Gautier, “Kécharitôménè,” 115
early 12th century	<i>didaskalos</i>	Constantinople	6–9 nomismata ¹³⁸	Gautier, <i>REB</i> 31 (1975)
1136	priest (Eleousa)	Constantinople	15 hyperpyra + 25 modioi	“Pantocrator,” 79
1136	chanter	Constantinople	12 hyperpyra + 20 modioi	“Pantocrator,” 79
1136	priest (hospital)	Constantinople	7 hyperpyra + wheat + wine	“Pantocrator,” 103
late 13th century	priest	Constantinople	28 hyperpyra + 12 modioi	Delehay, <i>Typika</i> , 110
late 13th century	hospital priest	Constantinople	12 hyperpyra + 24 modioi	Delehay, <i>Typika</i> , 110
1305	clerk	Constantinople	6–8 hyperpyra ¹³⁹	Pachymeres, 2:559–61

¹³⁷ The priests and deacons in charge of the church of the Virgin founded by Eustathios Boilas received 26 nomismata. However, we do not know how many of them had to share this sum (P. Lemerle, *Cinq études sur le XI^e siècle byzantin* [Paris, 1977], 23). In the countryside, priests who officiated in a village of more than 30 hearths were entitled to collect, as *kanonikon*, 1 nomisma, two silver coins, one sheep, 6 modioi of barley, six measures of wine, six measures of flour, and thirty fowls, the whole lot being worth less than six gold coins. A less important village meant a correspondingly smaller income (Zepos, *Jus*, 1:275–76). The priest was often a farmer as well.

¹³⁸ These *didaskaloi* received “3 pounds of nomismata lepton,” corresponding to a sum of 6 to 9 nomismata of good weight. Each one was also given 50 modioi of wheat.

¹³⁹ The clerks in the capital, who were “spoliated” by Athanasios, deemed the sum they received ridiculous.

of the twelfth century was entered as 3 hyperpyra in the list of expenses for the compilation of a bilingual chrysobull,¹⁴⁰ and, for work of a more frequent nature, the interpreter to the English embassy was paid 16⅔ hyperpyra for four months, that is, 4⅓ hyperpyra per month.¹⁴¹ Finally, we know that the notaries' honoraria, according to the *Book of the Eparch* (1.25), amounted to 12 keratia (½ nomisma) for an act relating to a sum not in excess of 100 nomismata, rising to one gold piece, and even two for the most important acts (Koder, *Das Eparchenbuch Leons des Weisen*, 1.25). Two keratia of every gold coin earned by a notary reverted to his scribe. We have a few rare prices for acts. The compiler of the will of Kale Pakouriane received 36 nomismata trachea (1098, *Iviron*, 2: no. 47). In Candia, a will was drawn up for 10 hyperpyra (in 1300, Pizolo, no. 646).

The distribution of both civilian salaries and ecclesiastical *rogai* reveals a strong hierarchy, with differentials of 1 to 10, even 15 or more.¹⁴² By comparing the salaries of different categories, we observe that civilian officials seem to have been at a disadvantage compared to the military. This impression is confirmed when we compare the patrimony worth 100 to 150 pounds of gold that Attaleiates accumulated in the course of his lengthy career as a judge, with the eight to ten times greater wealth of a military man such as Gregory Pakourianos, who was not initially more favored. However, Boilas fared no better than Attaleiates. With regard to the church, during the middle Byzantine period, metropolitans were lower in the scale of payments than high-ranking lay officials, such as judges, but we do not know how the incomes of dioceses evolved in relation to the expansion of the economy. The well-known case of the metropolitan of Thessalonike who had accumulated 33 kentenaria (247,600 nomismata) (Skylitzes, 402) is unique. In the private sector, craftsmen were paid scarcely less than specialists such as doctors and appear to have enjoyed incomes fairly similar to those of professional soldiers.

The more modest salaries hover at around 1 nomisma a month or 10 nomismata a year, though employment was not assured throughout the year. The permanent nature of this order of magnitude over a long period, from the sixth to the thirteenth century, corresponds to the stability that we observed with regard to the price of basic foodstuffs. This is not surprising, given that these prices served to determine the level of base salaries, the bulk of which was spent on food (ca. 80%). So we need to inquire into the living standards that they secured.

¹⁴⁰ P. Wirth, "Zur Frage der Herstellungskosten eines byzantinischen Chrysobulls," *JÖB* 42 (1992): 209–11 (the redactor received 4 hyperpyra and overall expenses amounted to 10 hyperpyra). Note, too, that these emoluments per act did not constitute the entire income of the people involved. The same document reveals that an interpreter, who had rendered service to numerous Pisans, received 20 hyperpyra on the occasion of his daughter's marriage in 1199. Müller, *Documenti*, 77a.

¹⁴¹ Embassy of Edward I.

¹⁴² We do not know about the income of bishops, but the rules relating to the liberalities offered by a newly elected bishop suggests that these revenues were, in the mid-Byzantine period, slightly inferior to those of contemporary *strategoi*. The legislation distinguished between several classes, according to whether the bishops received 10–30, 5–10, 3–5, 2–3, or less than 2 pounds of gold. E. Papagianni, *Τά οικονομικά του ἑγγαμου κλήρου στὸ Βυζάντιο* (Athens, 1986), 146.

Table 20
Examples of Regulation Rations

Early Byzantine Military Rations

<i>CPL</i> 199a (399) and <i>POxy</i> XVI, 2046 (563) ¹⁴³		<i>PFreer</i> 08 45c–d (Antaeopolis 533–543) ¹⁴⁴	
Daily Ration	Annual Equivalent	Daily Ration	Annual Equivalent
3 pounds bread [$\frac{1}{12}$ modios]	30 modioi wheat	6 pounds bread	60 modioi wheat
1 xestes wine	$20\frac{1}{3}$ measures	1 xestes wine	$20\frac{1}{3}$ measures
1 pound meat	365 pounds	$\frac{1}{2}$ pound meat	182 pounds
$\frac{1}{10}$ xestes oil	≤ 2 measures		

*Adelphata*¹⁴⁵

	<i>Lavra</i> , 1: no. 19 (1016)		<i>Lavra</i> , 1:	<i>Esphigménou</i> ,	<i>Docheiariou</i> , no. 48 (1381)	
	For 2 persons	[1 person]	no. 54 (1101–2)	no. 29 (1388)	3 persons ¹⁴⁶	[1 person]
<i>wheat</i>	30 modioi	15 modioi	12 modioi	12 tagaria = 27 modioi	24 tagaria	[18 modioi]
<i>wine</i>	50 measures	25 measures	40 measures	24 measures	16 tagaria wheat instead of wine	[12 modioi]
<i>vegetables</i> (<i>dried</i>)	6 modioi		3 modioi	2 tagaria = 5 modioi	4 tagaria	[3 modioi]
<i>oil</i>			12 litrai	6 measures	2 tetartia	[$\frac{2}{3}$ tetartia]
	6 nomismata for clothing ¹⁴⁷		1 megarikon of honey	30 pounds of cheese	50 pounds of cheese	[16 $\frac{2}{3}$ pounds]

continued

¹⁴³ C. Zuckerman, “*Legio V Macedonica* in Egypt: *CPL* 199 Revisited,” *Tyche* 3 (1988): 279–87. The same rations of wine and meat occur in *POxy* 2046: cf. Jones, *The Later Roman Empire, 284–603*, 3:191 n. 44—the ration for *bucellarii*, which also indicates total quantities of bread and oil, shown here.

¹⁴⁴ J. Gasco, “La table budgétaire d’Antaeopolis,” in *Hommes et richesses* (as above, note 19), 1:290–92.

¹⁴⁵ On the *adelphata*, cf. M. Živojinović, “Adelfati u Vizantiji i srednovjekovnoj Srbiji,” *ZRVI* 11 (1968): 241–70. The author estimates at 100 hyperpyra, the value of the capital offered to secure an income of this type for life.

¹⁴⁶ The document states that these rations are less than the norm. The tagarion was worth 28.8 kg or $2\frac{1}{4}$ modioi. The value of the tetartion in this act is still unknown.

¹⁴⁷ And for additional food.

Table 20
(continued)

Monastic Rations			
	<i>Diataxis</i> of Attaleiates, 69 (1077) (before 1118)	Gautier, "Kécharitôménè," 115 old men's rations	"Pantocrator," 91 (1136)
<i>wheat</i>	24 modioi	18 modioi	20 modioi
<i>wine</i>	24 measures	12 measures	18 measures
<i>vegetables (dried)</i>	3 modioi	1 modios	2 modioi
<i>oil</i>	1 nomisma [\pm 2 measures ?]	1 measure	
<i>cheese</i>	50 pounds	50 pounds	

These rations cannot easily be compared, since none of them can really be considered to approximate the minimum required for survival by an individual. As we know, some military rations were, in fact, supposed to feed a whole family and many others constituted a supplementary form of pay, while the *adelphata* could be the result of negotiations, depending on how much capital was involved or some other conditions, which could vary. Thus monastic rations are undoubtedly the most representative, and some of the amounts are similar to the military ration of 30 modioi of wheat and 20 measures of wine. A rough estimate of the latter in coin produces the following total:

Military rations				
	<i>POxy</i> 2046		<i>Diataxis</i> of Attaleiates	
<i>wheat</i>	30 modioi at $\frac{1}{30}$ nomisma	1 nomisma	24 modioi	$1\frac{9}{10}$ nomismata
<i>wine</i>	365 xestai at $\frac{1}{32}$ carat	$\frac{1}{2}$ nomisma	24 measures	$4\frac{8}{10}$ nomismata
<i>meat</i>	365 pounds at $\frac{1}{114}$ nomisma	$3\frac{1}{4}$ nomisma		
<i>oil</i>	$\frac{1}{10}$ xestes per day, $36\frac{1}{2}$ per year	ca. $\frac{3}{4}$ nomisma		1 nomisma
<i>vegetables (dried)</i>			3 modioi	$\frac{1}{12}$ nomisma ?
<i>cheese (or vegetables)</i>			50 pounds	1 nomisma
<i>Total</i>		$5\frac{1}{2}$ nomismata		$8\frac{3}{4}$ nomismata

Though very approximate, these estimates do show that the proportion of essential foodstuffs amounted to between three-quarters and two-thirds of the basic middle Byzantine salary and that this did indeed play a part in determining the rate of pay.

It is difficult to establish total levels of pay, given that payment was not exclusively

in coin and, in the case of employees of both the state and pious foundations, often included provisions in grain, even clothes, and numerous gifts, the value of which is hard to determine. However, we will venture the following observations.

With regard to nonagricultural jobs and the urban population, with the exception of beggars and marginals (though they must have comprised 10–20% of the urban population), three levels of income can be distinguished: (1) unqualified workers who were able, over a long period, to earn at most 1 nomisma per month, when not unemployed; (2) qualified workers, professional soldiers, and craftsmen, who enjoyed a wide margin of income, three to ten times more than that of unqualified workers; and (3) important officials, judges or *strategoï*, as well as the wealthiest merchants and bankers, whose incomes differed from the first category by a factor of 150 or more.

These levels of income would have given rise to very different capacities for consumption and saving. The most modest would have possessed jewels or clothes¹⁴⁸ worth at most one or two gold pieces, and would have lived in houses rented for no more than one or two gold pieces a year. The middle classes (*mesoi*) definitely feature more prominently in the sources after 1204, though they had already emerged in the great towns of the empire in the twelfth century; they were able to buy furnishings, jewels costing more than 10 hyperpyra, and possibly books and icons. They earned several tens of hyperpyra per year, paid considerable rents for their shops, and could pay pensions of 20–50 hyperpyra to their wives when they abandoned them, in Crete at least. Their daughters' dowries sometimes exceeded 100 hyperpyra. The wealthiest ones, such as the Deblitzenoi, owned jewels worth hundreds of hyperpyra, while others possessed important libraries. However, apart from a few exceptions such as the emperor's close relatives and favorites, the Byzantine aristocracy, the great landowners, and high officials did not have the means of maintaining a very numerous household. In fact, an income of a few litrai or even a few tens of litrai allowed for the upkeep of no more than ten or a few dozen household members, as demonstrated by the case of Kale Pakouriane and her twenty to twenty-five servants.

It was not too difficult to survive in Constantinople, since a follis or a tetarteron could, in normal times, secure a pound of bread and ten mackerel, or two kilos of fish, though meat would have been proportionally more expensive. One nomisma seems to have represented the normal monthly wage for an unqualified (and unfed) worker, which was certainly sufficient to feed and even clothe a family. Rents were extremely variable, but seem to have been low in the case of small houses.¹⁴⁹

To sum up, a person with a job, in a period when food supplies were operating normally, did not need to worry about malnutrition. Nor should we forget that we know nothing about the belt of gardens that surrounded the capital and constituted

¹⁴⁸ Any garment not in tatters is a luxury and a precious possession in preindustrial economies. Cf. the examples cited in C. Cipolla, *Before the Industrial Revolution* (London, 1993), 25–26.

¹⁴⁹ For instance, the annual rents that were drawn by the monastery of Theotokos Kecharitomenē in the 15th century at Constantinople: in the order of one gold piece or less. Gautier, "Kécharitô-ménē," 150–51.

an additional source of nutrition for numerous inhabitants.¹⁵⁰ Even the unemployed, meaning the poorest people, could survive on charitable distributions from monasteries and wealthy individuals. As might be expected, though, the slightest crisis caused food prices to surge in a spectacular manner, playing havoc with small family budgets. In the capital, the population at risk was generally rescued from starvation by the emperor's intervention. However, during the winter of 1077–78, Michael VII was unable to prevent the high death rate following the influx of refugees from Asia Minor and the civil wars. In similar circumstances, during the fourteenth century, Patriarch Athanasios vigorously petitioned Emperor Andronikos II to ensure the survival of a large proportion of the population.¹⁵¹ However, these were exceptional episodes, because even when the city (albeit with a reduced population) was being besieged by Avars, Arabs, or a variety of rebels, the prevailing indigence did not become so intense as to cause masses of people to die.

As for the peasants' living standards, every estimate or assessment, however hypothetical, must take a number of aspects into account: the extent of the tax, the *pakton*, the yields and possible improvements in productivity (see the relevant commentary by J. Lefort).¹⁵² The increase in the number of craftsmen in the countryside under the Palaiologoi constitutes a phenomenon familiar to economists as an indicator of growth. We conclude, while making due allowances and every kind of appropriate reservation, with the proposition that, in general terms, during the Byzantine period as a whole, or at least until the situation was reversed by the crisis in the 1350s, there occurred a relative rise in the living standards of the middle and lower social categories, excluding marginals.

List of Abbreviations

For abbreviations of papyri, refer to J. E. Bates, R. S. Bagnall, and W. H. Willis, *Checklist of Editions of Greek Papyri and Ostraca* (= *BASP*, suppl., 1 [1978]).

Alexiade: Anne Comnène, *Alexiade*, ed. B. Leib, 4 vols. (Paris, 1937–76).

Antoniadès-Bibicou: H. Antoniadès-Bibicou, "Démographie, salaires et prix au XI^e siècle," *AnnalesESC* 27 (1972): 215–46.

Ashtor, *Prix et salaires*: E. Ashtor, *Histoire des prix et des salaires dans l'Orient médiéval* (Paris, 1969).

Attaleiates: P. Gautier, "La *Diataxis* de Michel Attaliate," *REB* 39 (1981): 5–143.

Badoer: *Il libro dei conti di Giacomo Badoer*, ed. U. Dorini and T. Bertelè (Rome, 1956).

Bagnall, *Currency*: R. Bagnall, *Currency and Inflation in Fourth-Century Egypt* (Atlanta, 1985).

¹⁵⁰ J. Koder, "Fresh Vegetables for the Capital," in *Constantinople and Its Hinterland*, ed. C. Mango and G. Dagron (Aldershot, 1995), 49–56.

¹⁵¹ A. Laiou, "The Provisioning of Constantinople during the Winter of 1306–1307," *Byzantion* 37 (1967): 91–113.

¹⁵² Lefort, "Rural Economy," 299–305.

- Balard, *Outre-mer*, 1 and 2: M. Balard, *Gênes et l'Outre-mer*, vol. 1, *Les actes de Caffa du notaire Lamberto di Sambuceto* (Paris, 1973); vol. 2, *Actes de Kilia du notaire Antonio di Ponzò, 1360* (Paris, 1980).
- Balard, *Romanie*: M. Balard, *La Romanie génoise, XIIe-début du XVe siècle* (Rome, 1978).
- Balard, *TM*: M. Balard, "L'activité économique des ports du Bas-Danube au XIVe siècle," *TM* 8 (1981): 35–43.
- Bar Hebraeus: E. A. Wallis Budge, trans., *The Chronography of Gregory Abu'l-Faraj, the Son of Aaron, the Hebrew Physician, Commonly Known as Bar Hebraeus* (London, 1897; repr. 1976).
- Bertelè-Morrisson, *Numismatique byzantine*: T. Bertelè and C. Morrisson, *Numismatique byzantine, suivie de deux études inédites sur les monnaies des Paléologues* (Wetteren, 1978).
- Bertolotto: G. Bertolotto and A. Sanguinetti, Nuova serie di documenti sulle relazioni di Genova coll'Impero bizantino, *Atti della Società ligure di storia patria* 28 (1896–98): 337–573.
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Monemvasia, Seventh–Fifteenth Centuries

Haris Kalligas

The City and Its Territory

The city of Monemvasia, the “god-guarded fortress,”¹ was founded and grew on the limestone rock (1.5 km long, maximum width 600 m) that juts out from the eastern coast of the Peloponnese 20 miles north of Cape Malea. Above the narrow strip of land, by the sea, the cliffs rise vertically, forming a large sloping platform at the top, its higher point slightly exceeding 200 m. Monemvasia consisted of an arched bridge, the only connection with the mainland, which gave the city its name (“single entrance”); the port, on the rock, on both sides of the bridge; the fortress on the highest point and the upper city on the platform at the top; and the lower city, or *proasteion*, on the south side by the sea (Figs. 1, 2).

The port, arranged as a double port on both sides of the bridge, had its main basin

¹ Sp. Lambros, “Ταβουλλαρικόν γράμμα τοῦ ΙΔ' αἰῶνος,” Δελτίον τῆς Ἱστορικῆς καί Ἐθνολογικῆς Ἑταιρείας 5 (1900): 160. The study that follows is based primarily on H. A. Kalligas, *Byzantine Monemvasia: The Sources* (Monemvasia, 1990). The urban and architectural history presented here is based on the author's research on the urban evolution of Monemvasia, which is still unpublished. The main sources used are the following: Sp. Lambros, “Δύο Ἀναφοραί μητροπολίτου Μονεμβασίας πρὸς τὸν Πατριάρχην,” Νέος Ἑλλ. 12 (1915): 257–318; “Diplomata et acta ecclesiae et civitatis Monembasiensis,” MM, 5:154–78; St. Binon, “L'histoire et la légende de deux chrysobulles d'Andronic II en faveur de Monembasie: Macaire ou Phrantzès?” EO 37 (1938): 274–331; H. Belia, “Στατιστικά στοιχεία τῆς Ἐπαρχίας Ἐπιδάουρου Λιμηρᾶς κατὰ τὸ 1828,” Λακ.Σπ. 5 (1980): 60–117; *PLP*; P. Schreiner, “Ein Prostagma Andronikos' III. für die Monembasioten in Pegai (1328) und das gefälschte Chrysobull Andronikos' II. für die Monembasioten im byzantinischen Reich,” JÖB 27 (1978): 203–28. The following studies are important: A. Bon, *Le Péloponnèse byzantin jusqu' en 1204* (Paris, 1971); N. Drandakis, S. Kalopissi, and M. Panayotidi, “Ἐρευνα στὴν Ἐπίδαυρο Λιμηρά,” Πρακτ. Ἀρχ. Ἐτ. (1982): 349–466, and *ibid.* (1983): 209–63; Society for Studies in the Environment, N. Πελοπόννησος: Μελέτη Ἀναπτύξεως Προβληματικῶν Περιοχῶν, vol. 1 (Athens, 1974) (hereafter Πελοπόννησος); A. G. Kalligas and H. A. Kalligas, *Monemvasia* (Athens, 1986); H. A. Kalligas, “Ἡ ἐκκλησιαστικὴ ἀρχιτεκτονικὴ στὴ Μονεμβασία κατὰ τὴν Β' Ἑνετοκρατίᾳ καὶ τὸ καθολικὸ παρεκκλήσι τῆς Ἀγίας Ἀννας,” in Ἐκκλησίες στὴν Ἑλλάδα μετὰ τὴν Ἀλωση, ed. Ch. Bouras (Athens, 1979), 245–56; A. Laiou-Thomadakis, “Ἐμποροὶ καὶ ναυτικοὶ τῆς Μονεμβασίας στὸ 13ο–14ο αἰῶνα,” lectures by Monemvasiotikos Homilos, Monemvasia, July 1979; A. Laiou-Thomadakis, “The Byzantine Economy in the Mediterranean Trade System: Thirteenth–Fifteenth Centuries” DOP 34/35 (1980–81): 177–222; H. Xanalatou-Dergalin and A. Kouloglou-Pervolaraki, Μονεμβασία (Athens, 1974); D. Zakythinis, *Le despotat grec de Morée*, vol. 2, *Vie et institutions*, rev. Ch. Maltezou (London, 1975).

to the north, where the bottom is even, fairly deep, and suitable for ships to anchor. The quays were most probably wooden. On both sides of the port there are still traces of old construction, but for the time being there are no other records to show how the port installations were organized. In addition to the main port, several other auxiliary points on the rock were in use when the weather permitted, without permanent quays and with the help of boats.² A lighthouse to aid ships functioned at least since the thirteenth century. The natural defenses offered by the precipitous rock were not sufficient, so the city's fortification had to be completed with construction works. The combination of natural and artificial fortification ensured conditions of security almost to the present day.³ On the north side, a road that started from the bridge and the port led toward the acropolis and the upper city, and a second approach led through the *proasteion*.

The urban structure of the upper city during the late Byzantine period can be discerned only in parts; the same is true for the street network. There are, however, good indications that the earlier constructions were parallel to each other, considering, among other things, the position of the many early vaulted cisterns that still exist. In addition to the Hodegetria, an important twelfth-century church, ruins of only three churches have been located, scattered in the area of the upper city. The traces of the many others that must have existed disappeared gradually during the Turkish occupation. As in the lower city, churches were most probably used for burials. At the intersection of two main thoroughfares on the southwestern side, the remains of a building, the largest of the upper city, still survive; it was at least 25×25 m and probably had more than two floors. The double water cistern (10×17 m) is still intact. There was also, overlooking the sea at the front of the building, a vaulted chamber with arches that formed a sort of gallery. There can be no doubt that this was a public building, most probably the seat of the administration.⁴ There are no signs of other public buildings, and there does not seem to have been any commercial activity in the upper city.

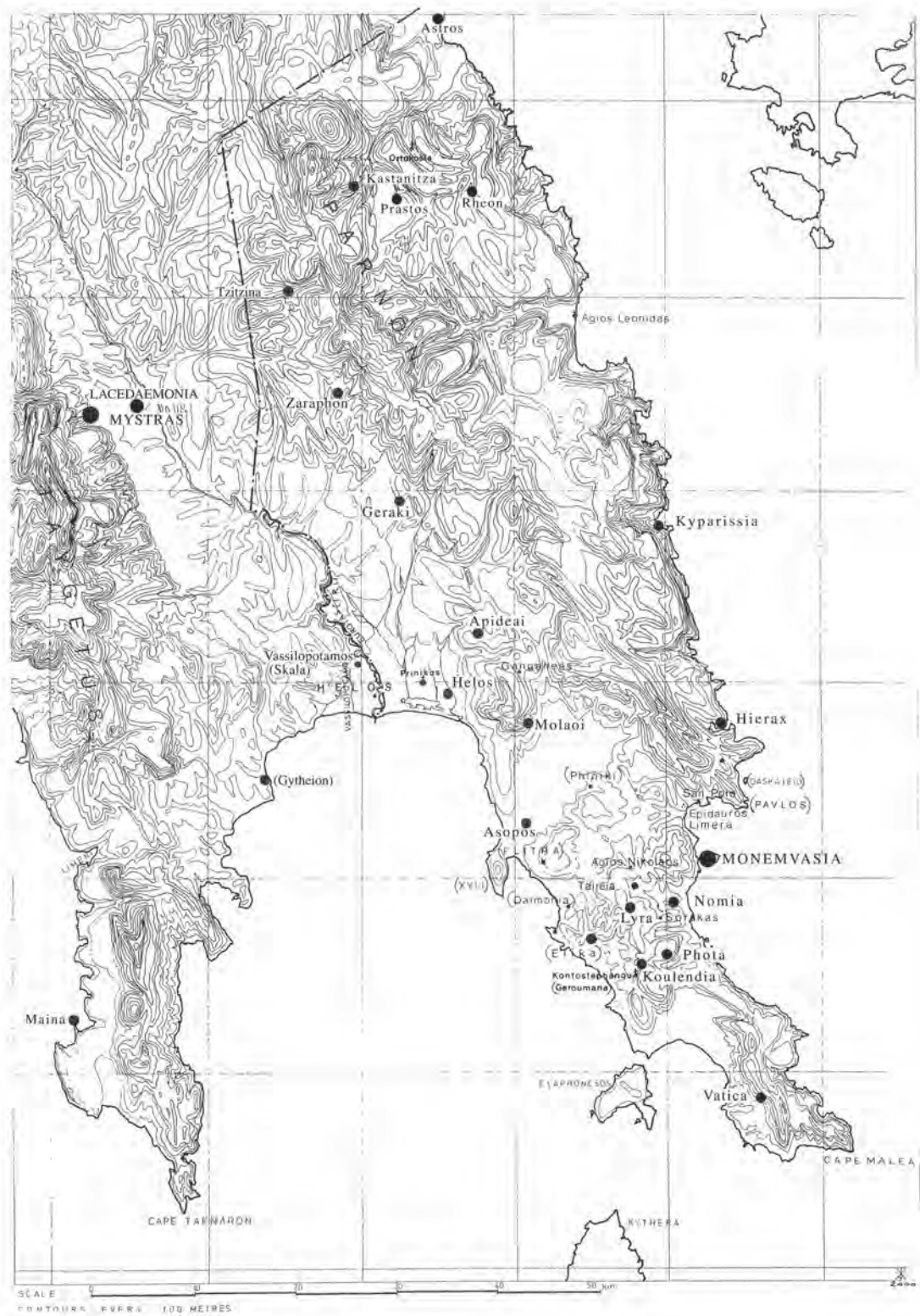
There are indications that houses were, at least in the Palaiologan period, of the same type as a number of those that still exist in ruined condition in the upper city.⁵

² To determine the exact site of the Byzantine port, research was carried out in 1993 by the archaeologist Elias Spondylis and the geologist Helen Hahami, both from the Ephoreia of Underwater Archaeology of the Ministry of Culture. The information presented here draws on their report. I would like to thank both of them. On the bottom of the sea there are remains of Byzantine as well as earlier shipwrecks. A port may have been in existence in the same place during earlier times.

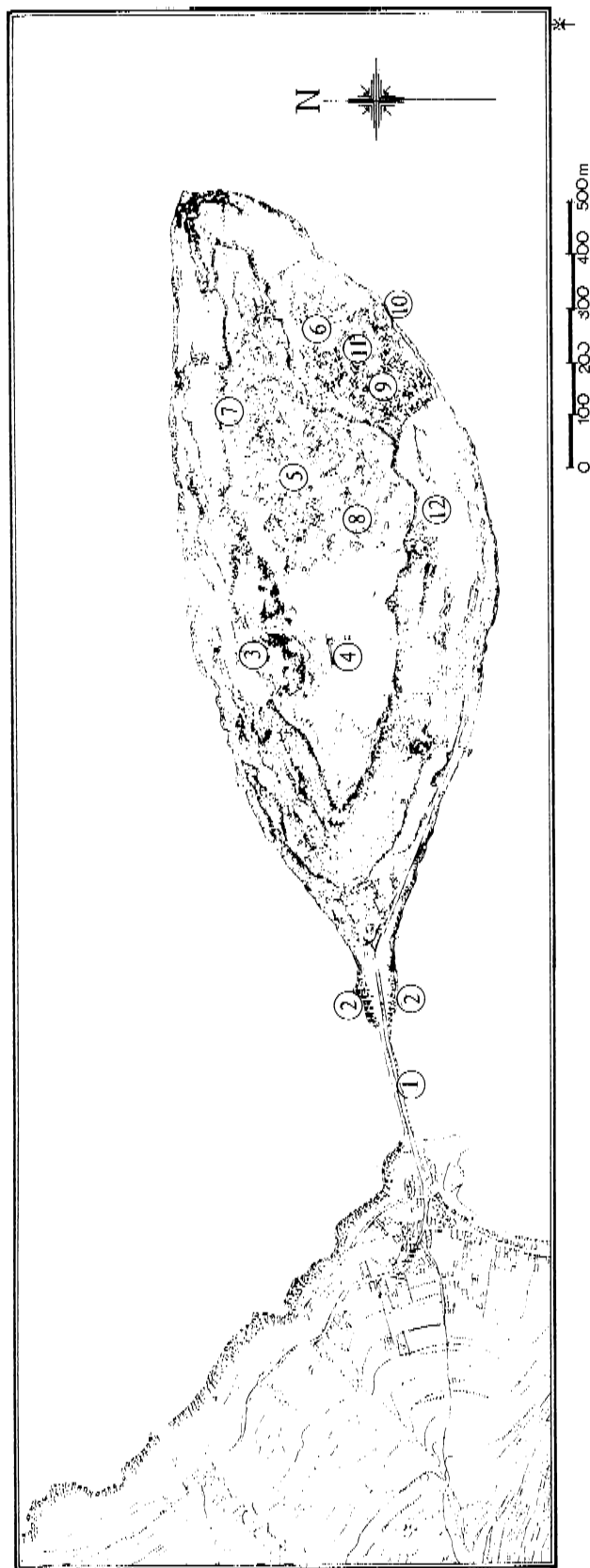
³ Without the security offered by the walls, the lower city could not have resisted Arab attacks from the 7th to the 10th century or the Norman attack in the 12th century. Even as late as the German occupation during World War II and the civil war that followed, the rock and its fortifications offered sufficient security.

⁴ The building was not in use during the first Turkish occupation. It is noted in the earliest known picture of Monemvasia, a woodcut of 1541, as "Palazzo," a strong indication that it must have been the seat of the administration. In Venice the equivalent administrative building, in which the archives of the city were also situated, was the Palazzo Ducale.

⁵ Peter Ian Kuniholm of Cornell University dated one of the houses, with the help of dendrochronology, to the first years of the Turkish occupation, that is, the middle of the 16th century. In certain buildings of this type there are clear remains of older periods.



1. The territory of Monemvasia with the principal towns and other points of importance



2. The rock of Monemvasia: 1. bridge, "single-entrance"; 2. double port; 3. north road leading to the upper city and the fortress; 4. fortress; 5. upper city; 6. lower city or *proasteion*; 7. Hodegetria; 8. ruins of the large building with the double cistern; 9. Foros or Agora; 10. sea gate; 11. Christ Elkomenos; 12. extension of the lower city

Like all the buildings there, they were built with limestone from the rock itself, combined with poros stone for all special construction, and had vaults in the lower level. The house was the dominant element in a group of buildings, which in most cases was surrounded by a stone fence, often fortified. The inhabited area of the upper city seems to have been organized in the same way.

The position of the *proasteion* on the wide part of the strip of land near the sea, invisible from the mainland, can be defined by that of the early Christian church of Elkomenos and the fortified ascent to the upper city. The U-shaped walls must have existed since the beginning of the Arab raids, most probably from the foundation of the city. The urban structure and the older street network can be located in various places.⁶ The main axis, continuing the road from the port, was the main commercial street, the Foros or Agora, which traversed the entire length of the lower city.⁷ Another axis, which crossed the first, was probably not entirely rectilinear; it connected the sea gate with the ascent to the upper city. This, too, seems to have been a commercial area, especially in the part nearer the sea gate. Building density in the lower city was very high, in contrast with the upper city, where the buildings were more spread out.

The large metropolitan church of Christ Elkomenos was at the intersection of the two main axes. The position of the other churches helps define the street network since most of them have phases that date from the Byzantine period. The city included at least one large monastic complex, and the caves of the rock and the nearby mainland sheltered various hermitages and small monasteries. There are no indications of any other buildings of special use, apart from warehouses and shops or workshops. Their structure was probably the same as those that have survived through tradition: simple, usually vaulted, with perhaps a cistern or a service area and often with a dwelling above. The houses in the lower city were of good construction but were much smaller than those of the upper city. They had more than two floors, with a timber roof and vaults on the lower levels, where we find water cisterns, as well as spaces for storing special products. The lower levels were particularly important for the aging of wine. Often there was a terrace, which was needed for spreading, drying, or processing various products. There seem to have been no stables, and most likely animals were not permitted in the city.

Originally the area outside the walls, between the port and the lower city, was sparsely occupied, taking part in the activities of both the port and the commercial areas of the city. This became more intense after the middle of the tenth century, which was the start of a period of prosperity. Gradually the *proasteion* spread out from the walls toward the port, but also toward the rest of the strip of land near the sea, to the east and north. This dynamic growth, especially after the eleventh century, seems to

⁶ These elements are being localized with the help of the detailed surveys that have been carried out since 1966 by the author in collaboration with A. G. Kalligas for the restoration of houses in the lower city.

⁷ It is mentioned as "Foros" in the population censuses of 1699–1700. See, e.g., K. N. Dokos, "Ἡ ἐν Πελοποννήσῳ ἐκκλησιαστικὴ περιουσία κατὰ τὴν περίοδον τῆς Β' Ἑνετοκρατίας," *BNJ* 21 (1971–74): 137–39.

have led to a merging of land use zones, which existed since the earlier centuries but had originally been completely distinct.

The territory of Monemvasia covered the region of Mount Parnon, as well as its peninsula. Most of the area is mountainous or semi-mountainous, particularly steep in the northeastern part, with some sheltered gulfs or bays. The western and southern shores are smoother, with wide, sandy bays.⁸ The position of the city on the rock of the eastern coast was vital for communications in the Aegean and the Mediterranean, especially with Constantinople and Italy; it was mainly by sea that the city and its region communicated with the empire and the rest of the world. However, a well-organized road system existed within the territory, which connected settlements, ports, and other points between them; road and sea communications were systematically combined.

During the Palaiologan period, the territory of Monemvasia included many settlements of various sizes. Thirteen of them, probably the most important, are mentioned in the "silver bull" issued in 1391–92 by Despot Theodore I for Monemvasia.⁹ By combining information from sources of various periods one can conclude that there existed in the territory more than fifty settlements and that most of them had some sort of fortification.¹⁰ The "city," that is, Monemvasia, the central settlement, controlled a smaller area of its own, a long strip of land that started in the north from Yerakas and ended south at Agios Phokas. It comprised some important settlements and several smaller ones, as well as a series of ports and smaller harbors and apparently the best viticultural land in the territory. The secondary settlements depended on the city and in turn controlled their own individual areas, which were large and in many cases had a specialized production and function.¹¹ Around the secondary settlements there was a network of smaller ones and other installations. Most of the settlements of the territory were inland, but could be serviced from the sea by a port or a smaller harbor or pier.¹² Some of the coastal settlements, such as Yerakas, remained in use from ancient times.

Population

The growth of the city during the Byzantine period is indicated by the density of building remains that cover the whole area of the rock. The number of buildings, their

⁸ Πελοπόννησος, 46–48.

⁹ The following settlements are mentioned: Apideai, Esopos, Agios Leonidas, Helos, Hierakion, Kastanitza, Prastos, Rheon, Seraphon, Tzaconia, Tzitzina, Vatica: MM 5:24–29.

¹⁰ The numbers result from the combined information of various sources, mostly Byzantine, Venetian, and more recent censuses. Of great help are the contents of the report compiled in 1828 for John Kapodistrias, the governor of Greece. It is reliable and detailed and often refers to earlier periods: Belia, "1828," 60–117. For the fortifications of Molaoi and Seraphon, see A. Bon, *La Morée franque* (Paris, 1969), 511, 661, and pls. 158, 1 a–b, 159, 1 a–b.

¹¹ For example, the area around Molaoi specialized in the production of kermes.

¹² Two inland settlements, Lyra and Koulendia, still retain their towers on the western shore, erected to ensure security and communications by sea. There are indications that there was a network of towers near the shore.

density and use, and consequently the population fluctuated in various periods. During the seventh century the population of the city seems to have increased. This was due to the greater importance of the port and to the fact that it attracted inhabitants from other settlements, threatened by attacks or gradually deserted for various reasons, such as the difficulty of communications by land.¹³ However, with the Arab raids, particularly after the Arab settlement in Crete, Monemvasia went through a period of economic decline, even though more inhabitants must have poured into the city from areas exposed to the raids. The decline is reflected, among other things, by the lowering of the rank of the ecclesiastical see of Monemvasia from a metropolis to that of a simple bishopric at the beginning of the tenth century.

The relative security at sea and other favorable conditions that prevailed after the middle of the tenth century contributed again to the growth of the city, a trend that continued until the middle of the thirteenth century, when Monemvasia was conquered by the Franks. Built-up areas grew outside the walls of the lower city and covered every space available on the rock, to the west toward the port, which was united with the lower city, toward the east, even on the steep and exposed north side. In the ecclesiastical hierarchy, the promotion of Monemvasia from an episcopal to a metropolitan see again reflects these changes.¹⁴

The presence of the Latins in the Peloponnese beginning in 1204 does not seem to have upset the situation. On the contrary, it is certain that the population grew, since the city and much of its territory, having remained free for half a century, functioned as a shelter for a considerable number of refugees from the possessions of the Latins. Besides, contact had been established with the emperor in Nicaea, commerce had not been interrupted, and some of the archons of the city were on friendly terms with the Latins.¹⁵ On the other hand, the capture of the city by William II Villehardouin, around the middle of the thirteenth century after a long siege, was disastrous. There was a severe decline in population with the mass migration of the active inhabitants to Asia Minor, the town of Pegai in particular. Those who remained in Monemvasia were the less dynamic element, described by the sources as "exhausted and needy." This sudden loss contributed to the abandonment of large areas, particularly outside the walls.¹⁶

The return of a considerable part of the inhabitants with their ships after 1262, when

¹³ The settlement in the plain of Molaoi (possibly Leukai) seems to have been deserted in the 6th century. See R. Etzéoglou, "Quelques aspects des agglomérations paléochrétiennes au sud-est de la Laconie," in *Géographie du monde méditerranéen* (Paris, 1988), 102. Other settlements, such as Epidauros Limera, seem also to have been abandoned.

¹⁴ The development of the city must have been helped by the installation on the rock of groups from other areas of the empire, for example, that of Corinthians after the sack of Corinth by the Normans in 1147. Apparently this was due to the initiative of the bishop of Monemvasia. Kalligas, *Sources*, 67–68, 210.

¹⁵ Cf. the large number of churches in the area with paintings from the 13th century: Drandakis, Kalopissi, and Panayotidi, "Ερευνα," (1982), 349–466 and *ibid.* (1983), 209–63.

¹⁶ Lambros, "Αναφορά," 289. The deserted areas do not seem to have been inhabited since that time. An example is the "Terra Vecchia," between the west wall and the bridge, depicted in the woodcut of 1541.

Monemvasia again came under the rule of Byzantium, revived the city to a large degree. However, although the growth was once more intense, it does not seem to have approached the levels of the period before the Frankish conquest. Moreover, an important number of Monemvasiots had by then settled in other areas: in Pegai, Constantinople, Anaia, Crete, Thrace, and the Black Sea region. In Monemvasia itself there were a number of foreign merchants.¹⁷ Another crisis around 1390 led, despite the efforts of Despot Theodore I, to a further shrinking of the city, with the lower city covering approximately the same area as today.

As was mentioned, the fluctuations in the inhabited area on the rock reflect the approximate changes in population. Based on the density of the buildings, one could deduce that during the periods when the lower city was confined within the walls but there was important activity around the port—that is, during the seventh century, after the middle of the tenth, and before the end of the fourteenth century—there may have been approximately 1,800 houses on the rock. If we assume an average of four persons per family, we reach a total of 7,200 inhabitants.¹⁸ However, at the times of its greatest growth, Monemvasia must have been more heavily populated. From the ruins one can calculate an approximate number of 5,000 buildings for the period when all of the rock was built up, which means 20,000 inhabitants. It would have been extremely difficult to surpass this number. Concerning the population of the territory of Monemvasia, it is likely that it was approximately ten times the number of inhabitants of the city, that is, 65,000–70,000 during the seventh, tenth, and fourteenth centuries.¹⁹

Institutions and Privileges

The monk Isidore, residing and writing in Monemvasia in the 1430s, refers to the older institutions for the administration of the city, which had survived since the Roman period until at least the middle of the thirteenth century. He mentions that the inhabitants of Lakedaimon—a *civitas foederata* of the Roman Empire enjoying the privilege of ἀτέλεια εἰσαγωγίμου, as is well known²⁰—when they abandoned Sparta and became founders of Monemvasia in the sixth century, retained the status of ὑπόσπονδοι of the Byzantine emperor. Their ruler had the title of *rex*, and they were “loyal allies of the Roman emperor” and had preserved their “well-known, customary, and ancient Dorian freedom.”²¹ Although, apart from this specific reference by Isidore, only hints

¹⁷ Morgan, “Venetian Claims,” 428, no. 34 (Bernardus of Monemvasia) and 431, no. 133 (Gulielmo of Monemvasia); they were probably Genoese. See F. Thiriet, *Régestes des délibérations du Sénat de Venise concernant la Romanie*, 3 vols. (Paris, 1958–61), 2: nos. 1756, 1798, 1831; 3: nos. 2048, 2706, 2763. A Venetian consul is mentioned in Monemvasia. See Ch. Maltezos, *Ὁ θεσμός τοῦ ἐν Κωνσταντινουπόλει Βενετοῦ Βαΐλου, 1268–1453* (Athens, 1970), 230.

¹⁸ These numbers are supported by the facts mentioned in the report of 1828, from which we can deduce that Monemvasia during the late Byzantine period had more than ten times the population of the 19th century (659 inhabitants), that is, more than 6,500 people.

¹⁹ The proportion is calculated with reference to the data for 1828.

²⁰ Kalligas, *Sources*, 35–39, 97–98, 101–33, 263–68; S. J. Laet, *Portorium: Etude sur l'organisation douanière chez les Romains, surtout à l'époque du haut-empire* (Bruges, 1949), 353; P. Cartledge and A. Spawforth, *Hellenistic and Roman Sparta: A Tale of Two Cities* (London, 1989), 151.

²¹ Lambros, “Ἀναφορά,” 289.

on the continuity of institutions can be found in other sources, the references seem to argue for such a continuity. For example, the territory of Monemvasia had not been included in the *Partitio Romaniae*, which, in 1203, took account only of imperial lands, which means that it had some sort of self-government. Also, in the middle of the thirteenth century, William II Villehardouin confirmed the privilege of immunity, which indicates that the privilege already existed. After the recovery of Monemvasia from the Franks, the first source to mention explicitly the return to an older status of special “conditions” is the chrysobull issued by Michael VIII Palaiologos: “under the Romans . . . and their suzerainty they have been placed, with the same conditions as before.” The chrysobull also confirms the reintroduction of *exkousseia* and *eleutheria* and the exemption from the obligation to pay the *kommerkion* within the city of Monemvasia. The first two are the old privilege of immunity, while the equivalent of the latter—the exemption from paying the *kommerkion* to the central administration—is the older ἀτέλεια εισαγωγίμου. This particular privilege, which favored the development of commerce and the accumulation of wealth, offered important funds to the administration of the city. The privileges were confirmed by Andronikos II, Andronikos III, and Despot Theodore I, and documents of the despots Theodore II and Demetrius inform us about the use to which the city administration put the *kommerkion*.²²

Consequences of the possibilities offered to the Monemvasiots by the special privileges and exemptions were the financial comfort, abundance of goods, and accumulation of wealth to which the chrysobull of Andronikos II of 1301 refers. The wealth of the city is also attested by the large number of remains of carefully constructed buildings and water cisterns. Testimonies from saints’ lives about contacts with distant places and important ports reinforce, for the early centuries, the same impression of wealth. The city and its ecclesiastical see had the means to settle and assist an important number of refugees after the sack of Corinth in 1147. One of the most important architectural monuments of the twelfth century, the octagonal church of the Virgin Hodegetria, was built in the upper city, and other remarkable monuments existed in its territory. Around the end of the twelfth century, works of art in Monemvasia made even the emperor envious. Art flourished also after 1204, when groups of artists from occupied areas gathered in free Monemvasia.

The exemption from the *kommerkion*, which was reintroduced by the chrysobull of Michael VIII in his effort to invigorate the city after the short interval of Frankish occupation, and the confirmation of this exemption by Andronikos II, restored the wealth of the city to its earlier levels. The city was so rich that, when Roger de Lluria in 1292 launched his piratical attack, taking the inhabitants by surprise, he was able to seize such a spectacular amount of loot that “it could satisfy five fleets equivalent to his own.”²³

²² Kalligas, *Sources*, 38–39, 71–79, 92.

²³ Muntaner, *Chroniques étrangères relatives aux expéditions françaises pendant le XIII^e siècle*, ed. J. A. C. Buchon (Paris, 1841), 330: “et alla en Romanie et courut les îles de Metelin, Stalimene, les Formans, Tino, Andros, Miconi, puis l’île de Chio où se fait le mastic, et prit la ville de Malvoisie, et revint avec un butin si considérable qu’il y avait de quoi satisfaire cinq flottes semblables à la sienne.” It is probable that the loot included that from the other islands.

Andronikos II granted even greater privileges to the Monemvasiots, exempting them totally from the *kommerkion* in most cities of the empire and lowering it in Constantinople and the ports of Thrace. These grants gave Monemvasia the opportunity to develop into one of the most dynamic and wealthiest cities of Byzantium. Its difference from the other cities is best depicted by the list of 1324, containing the contributions of the metropolitan sees of the empire for the support of the patriarchate of Constantinople. The contributions, 3,108 hyperpera, were defined in proportion to the financial means of each city. The smallest amount is 16 hyperpera, offered by one see, and the largest is 800, offered by the metropolis of Monemvasia, four times the contribution of Thessalonike and more than one-fourth of the total.

The chrysobull granted by Andronikos III in 1336 exempts from any obligation to pay the *kommerkion* not only the Monemvasiots but also all who had any transactions with them. Furthermore, these exemptions also covered their descendants in perpetuity. This was the greatest extent of privileges that Monemvasia ever enjoyed. The gradual settlement of groups of Monemvasiots in the capital and other areas, and especially the civil disputes that followed the death of Despot Manuel Kantakouzenos in 1380 and its brief surrender to the Turks, were terrible blows for Monemvasia, from which the city does not seem to have been able to recover. There is, however, an area in which the old wealth is still reflected in the fifteenth century—intellectual activities and education. Foreign languages were taught, and books were written. The existence of a rich library of legal works in fifteenth-century Monemvasia, at a time when these were difficult to find even in the capital, is impressive.²⁴

There is no specific information as to how the administration of the city was organized. A βουλή, or rather an assembly of the inhabitants, is only mentioned in 1460, on the occasion of the surrender to Pope Pius II. However, this may not have been the usual practice.²⁵ In the late fifteenth century, when Monemvasia was under Venetian rule, there are mentions of the “proti di questa terra,” who were prominent citizens. They may have formed the body that elected the archon and made important decisions.²⁶ The same documents also mention the “Zitadin principal di questa terra.” Could this official have been a holdover from the institution of the archon elected by the Monemvasiots, who used to rule jointly with the *kephale*, appointed by the central administration? Is it possible that the old practice continued through the period of Venetian rule?

There are no special references to archons in Monemvasia before the thirteenth century. The first to be mentioned is Chamaretos, who allied himself with Villehardouin in 1204. His son Leo followed him, and two decades later Ioannis Chamaretos bore the title of despot and was governor of Monemvasia until 1222. In the middle of

²⁴ H. Papagianni and S. Troianos, *Μία νομική βιβλιοθήκη στή Μονεμβασία τόν 15ο αιώνα* (Athens, 1990), 14–15.

²⁵ Kalligas, *Sources*, 191–93.

²⁶ Unpublished documents: Archivio di Stato di Venezia (ASV), Avogaria di Comun, Miscellanea Penale, B. 170, P. 7, fols. 1–2.

the same century a *rex* is mentioned (whose name is not preserved), who led the inhabitants to Asia Minor after the surrender to the Franks. With the return of Byzantine rule, a Kantakouzenos is mentioned as *kephale* of Monemvasia. Another archon in Monemvasia might have been Despot John Kantakouzenos, the rebel son of Matthew Kantakouzenos. Originating from Monemvasia, but also related to the imperial family and also a rebel, was another archon of the city, the *megas dux* Palaiologos-Mamonas. His father, too, had been archon of Monemvasia.

There are mentions in the sources of two *tavoullarioi*: Leo, in 898, and Demetrios Manikaitis, public notary and *tavoullarios*, in 1426. Certain official functions that had survived are mentioned in the late fifteenth century. Possibly they were only honorific, like the “principal prote di questa terra,” in this case a certain *miser* Micali, who was also *magno cartofilaca*. Other functions are also mentioned: the *sachellari*, the *cartofilaca*, the *castrofilaca*, the *protostratora*, the *gran conestabel*, the *conestabel a la Porta di Malvasia*, and the *castelan al Ponte*. There is no information on the organization of finances, the management of taxes, the structure of defense, or the administration of the territory of the city.

Monemvasiot family names are not found before the late twelfth century.²⁷ The earliest known are the Mavrozomis. Theodore was active before 1169; John is mentioned in 1185 and a Mavrosimi di Monembasia in 1319. Around the end of the twelfth century, George Pachis from Monemvasia became the governor of Kythera. In 1333 there was a Constantine Pachis involved in maritime commercial enterprises between Crete and Monemvasia. In addition to the members of the Chamaretos family mentioned earlier, there is reference in 1222 of Michael, uncle of Despot John Chamaretos.

The first appearance of the Monemvasiot family of Daimonoianis or Eudaimonoianis is noted in Kythera between 1180 and 1190, when the administration of Kythera was offered to one of its members. The island remained in their hands until 1238. Around 1222 George Daimonoianis, *protopansebastohypertatos*, and his daughter are found in Monemvasia. Another Daimonoianis is one of the three archons (Daimonoianis, Mamonas, and Sophianos) who gave Monemvasia to Villehardouin. From that time until the end of the Venetian occupation, many members of the family are found in Monemvasia, Constantinople, Crete, Anaia, the Black Sea region, Italy, and elsewhere, as merchants, shipowners, sailors, pirates, and priests. They also participated in the administration and were connected with the imperial family.

²⁷ The data on the families, apart from the studies already mentioned, derive from the following sources: *Il libro dei conti di Giacomo Badoer* ed. U. Dorini and T. Bertelè (Rome, 1956); C. Gasparis, “Ἡ ναυτιλιακή κίνηση ἀπὸ τὴν Κρήτη πρὸς τὴν Πελοπόννησο κατὰ τὸ 14ο αἰῶνα,” *Τὰ Ἱστορικά* 9.12 (1988): 293–304; A. Laiou-Thomadakis, “The Greek Merchant of the Palaeologan Period: A Collective Portrait,” *Πρακτικὰ τῆς Ἀκαδημίας Ἀθηνῶν* 57 (1982): 96–132; P. Magdalino, *The Empire of Manuel Komnenos, 1143–1180* (Cambridge, 1993), 257; Ch. Maltezou, *Βενετική Παρουσία στὰ Κύθηρα* (Athens, 1991), VIII, XII, XIII; K.-P. Matschke, “The Notaras Family and Its Italian Connections,” *DOP* 49 (1995): 59–72; A. Meliarakis, *Οἰκογένεια Μαμωνᾶ* (Athens, 1902); N. Oikonomides, *Hommes d'affaires grecs et latins à Constantinople, XIIIe–XVe siècles* (Montreal, 1979); *Παλαιοιολόγια καὶ Πελοποννησιακά* 4: ζ'; R. Predelli, *I libri commemoriali della repubblica di Venezia regesti, 1293–1787*, vol. 1 (Venice, 1876); S. Fasoulakis, “Ἡ οἰκογένεια Καβάκη,” *Λακ.Σπ.* 5 (1980): 39–48.

The Mamonas family included, as its first known member, one of the three archons who were responsible for the surrender of Monemvasia to Villehardouin. Since then the family's history parallels that of the Daimonoianis, with its members in Monemvasia and other places engaged in all sorts of activities, as pirates, sailors, merchants, and also officials with close ties to the imperial family, as was the case with the *megas dux* and master of Monemvasia Palaiologos-Mamonas. In the fifteenth century, members of the family are mentioned with the double surname Mamonas-Gregoras. The priest Niketas Mamonas and Theodore Komes were sent to offer Monemvasia to Pope Pius II.²⁸

The third archon among those who surrendered Monemvasia to the Franks belonged to the Sophianos family. The presence of this family in Monemvasia, Constantinople, and elsewhere is also noteworthy until after the fifteenth century, although it is not as important as the other two. The Notaras family was connected with Monemvasia from at least the thirteenth century. Paul Notaras, *sebastos*, became archon of Kythera in 1270. Members of the family are found in various places, but after the fifteenth century there are practically no mentions of any of them in Monemvasia. Paul Komes was a member of another important family. In the middle of the fourteenth century, he was a merchant active between Crete and Monemvasia. Andreas Komes is mentioned in 1432 and Theodore in 1460; the latter was a member of the delegation that delivered Monemvasia to Pope Pius II, possibly the same person as the recipient of a silver bull of Constantine Palaiologos. Other members of the family are found in the late fifteenth century.

Many more well known Monemvasiot families, engaged in various activities, are found in the fourteenth and fifteenth centuries, including the families of Kavakis, Kontoleos, Korinthios, Sarandinos, and Sviros. We know other, less prominent, surnames, mainly of merchants and sailors, such as Daras, Alexandrinos, Katiditis, and Kiniotis. For other families, such as the Cheilas and Prinkips, it is possible, but not certain, that they came from Monemvasia. Others bear the designation "Monemvasiot" or "from Monemvasia" in place of a surname. They are often eminent individuals with surnames so well known that there was no reason to mention them.

Production and Commerce

A large part of the products in which the Monemvasiots traded came from the primary production of its territory. The area is mostly mountainous, but the land lends itself to cultivation, mainly without irrigation. In some places irrigation was possible with surface or underground water, and there were some important plains such as those of Helos, Asopos, Molaoi, Apidia, Belies, and Vatica. The territory was also good for raising livestock and exploiting forest products. A well-documented report, which was compiled for the governor Kapodistrias in 1828, provides information on the productive possibilities in the area of Monemvasia and is useful for interpreting the sources

²⁸ It should be noted that the copy of the document in the Vatican archives transmits the name Nourona or Mourona, which is, I believe, a faulty reading of the name of Mamonas by the scribe. Kalligas, *Sources*, 191.

of the Byzantine period.²⁹ The land suitable for cultivation in 1828 was 340 km². This area represents 24.13% of the total of the territory of Monemvasia at that time, which was 1,326 km². The land was suitable mainly for olives and grapevines; more than 100,000 olive trees are recorded, including a number of wild olives, and 59 oil presses. In Byzantine documents there are no direct mentions of oil production; it is, however, implied in other sources.

References to vineyards, wine, and their respective taxes are found in many Byzantine documents and sources concerning Monemvasia. The chrysobull of 1301 for the possessions of the metropolis mentions many vineyards that were dispersed among other landholdings, while the chrysobull of 1336 exempts the Monemvasiots from taxes on wine, listing all the relevant taxes. In the silver bull of Theodore I of 1390–91, wine is mentioned as one of the three main categories of products that the Monemvasiots traded in.³⁰ One may assume that viticulture was considerable. A letter of the monk Isidore, addressed to Despot Theodore II in Mistra, mentions that the inhabitants of the Chora of Elikovounon had viticulture as their exclusive occupation.

By 1828 the vineyards had almost entirely disappeared, covering only 1.65 km², which represented only 0.12% of the total and 0.51% of land suitable for cultivation. The report mentions that the best part of viticultural land was situated near Monemvasia, in its particular territory, a long strip of land that started to the north from Yerakas and ended south in Agios Phokas.³¹ The author of the report notes that “before the conquest [by the Turks] . . . all the land was covered with vineyards, and until now the terraces can be seen, where there were vineyards. . . . They say that . . . [in] a register from the time of the Venetians . . . it was recorded that from the vineyards of this province the tenth part . . . of what was gathered in one year was 32,000 barrels.” According to the information of this register, which so far has not been located, yearly production around the end of the fifteenth century must have been about 16,000,000 liters. This production corresponded approximately to ca. 640 km² of vineyards, or 48.26% of the total territory.³² It is not possible to confirm this information, but in favor of this large percentage in the area that used to be the territory of Monemvasia are, on the one hand, the large number of place names related to viticulture and, on the other, the area occupied by old terraces.³³ It is interesting to note that the register

²⁹ Belia, “1828,” 60–117. The territory examined in 1828 is slightly smaller than that of Byzantine Monemvasia and had as a limit to the north Kyparissi and not Astros. The comparison of the report with the Byzantine sources is justified because the interventions in the territory did not substantially change the older conditions, apart from the severe shrinking of population and its consequences.

³⁰ MM 5:164, 166, 172.

³¹ The area is called Top Alti or Proasteia. Belia, “1828,” 66, 104.

³² I take the Cretan-Venetian barrel to be 500 liters, which is an intermediate value between the 600.936 liters of Herakleion and the 450.702 liters of Crete. E. Schilbach, *Byzantinische Metrologie* (Munich, 1970), 144, 275. The output is calculated as 250 liters of wine per 1,000 m², on a total surface equal to that of 1828.

³³ E.g., in the village of Agios Nikolaos of Monemvasia, where olive cultivation is dominant today, all the place names of the fields are associated with vineyards, e.g., Upper Vineyard. In addition, winepresses can still be seen in most fields.

was composed in a period of commercial decline, when part of the territory was already in Turkish hands and a large part of viticultural and farming land had been destroyed by grazing flocks.

Specialized research is necessary to interpret with certainty the information concerning the origin, production, diffusion, and dissemination of “Monemvasios” wine, or “Dorian wine from Monemvasia of the Peloponnese” or “malvasia,” which is described as “manna alla boca e balsamo al cervello.” It had the color of amber and underwent condensation through boiling. The fermentation, which was interrupted, resumed during transport by sea. A similar method of producing wine in Laconia is mentioned in the *Geoponica*: “The Lakedaimonians leave their wine in the fire until one-fifth evaporates, and after four years they use it.”³⁴

Until the twelfth century, wine was one of the so-called *κεκωλυμένα προϊόντα*, products whose circulation was prohibited outside the limits of the Byzantine Empire. A first hint concerning the marketing of Monemvasiot wine is found at the beginning of the thirteenth century. The production of malvasia in Crete began in the fourteenth century; an effort was made to transport the vines (“*urtibus de Maloisie*,” “*plantatum urtibus monovasiae*”) from their place of origin and transplant them in Crete.³⁵ The fact that later sources always call it “monovasia wine” or “monovasia” points very strongly toward the origin being from Monemvasia and not from Crete or elsewhere. Another important fact is that the rock of Monemvasia contains an abundance of vaults, in which the conditions for fermenting and aging the wine are excellent.³⁶ In Italian sources, apart from the name *malvasia*, which in later times was used almost exclusively, a series of variations of names for the wine were common, including *vinum Malvasie*, *vinum Monemvasie*, *vino Marvasie*, *vino malvatico*, *vinum de Monovasia*, *vino de Malvagia*.³⁷

Other products reported in 1828 are wheat and cotton in limited quantities and a considerable production of onions and garlic. We can deduce from Byzantine sources that wheat and barley were produced, as well as flax, which is not mentioned in 1828. The same report mentions fifty-five water mills and various trees including mulberry, almond, lemon, orange, bitter-orange, quince, pomegranate, pear, walnut, and chestnut. Water mills as well as a variety of trees, the same as those mentioned in 1828, must

³⁴ Kalligas, *Sources*, 79, 133; B. D. Krimbas, “Ο οἶνος καὶ αἱ ποικιλίαι ἀμπέλου Μαλβαζία,” in Ἐπιστημονικὴ Τριακονταπεντηρὶς καθηγητοῦ Ν.Α. Κρητικοῦ (Athens, 1944), 112–44, with many uncertainties as to the origin of the wine. See, in particular, p. 113, and cf. also p. 125.

³⁵ Cf. B. Imhaus, “Enchères des fiefs et vignobles de la république vénitienne en Crète au XIV^e siècle,” *ΕΕΒΣ* 41 (1974): 203, 207.

³⁶ H. Bourazeli, “Ἡ Μονοβάσια (-ιά) καὶ ἡ μονοβάσια (-ιά),” *Πλάτων* 5 (1953): 255–78. The effort to present malvasia as a wine whose origin was the Cretan district of Malevizi cannot be seriously supported. See Zakythinis, *Despotat*, 2:173, 249–50; P. Topping, “Viticulture in Venetian Crete, XIIIth c.,” in *Πεπραγμένα τοῦ Δ’ Διεθνoῦς Κρητολογικοῦ Συνεδρίου* (Athens, 1981), 2:509.

³⁷ Theotokis, *Misti*, 1:113 (1326); F. Thiriet, *Délibérations des assemblées vénitiennes concernant la Romanie*, 2 vols. (Paris, 1966–71), 2: no. 1353 (1436); N. Iorga, *Notes et extraits pour servir à l’histoire des croisades au XV^e siècle*, 4 vols. (Paris, 1899–1916), 1:64 (1325); 2:9 (1438); Theotokis, *Misti*, 2:226 (1381); Iorga, *Notes et extraits*, 4: no. 44.

have existed during the Byzantine period. The chrysobull of 1301 for the property of the metropolitan see, for example, mentions orchards, trees, and four water mills, and a legal document of 1432 mentions mulberry trees as the boundary of a field.³⁸

It is noted in 1828 that the area was very well suited for raising livestock. However, the 65,000 sheep and goats and the 167 folds that are inventoried did not correspond to the potential of the territory. Apparently in the fourteenth century this potential was put to better use. According to the chrysobull of 1336 the Monemvasiots traded in “livestock or agricultural products or other commodities”; also mentioned are “quadrupeds, salted meat, skins or hides, and felt.” There are indications that horses were bred. Despite the lack of specific mentions, the production of high-quality honey and wax must be considered certain.³⁹

Forests of firs and cypresses made possible the production of timber. In 1828 there was only one such forest, in Kyparissi, but it is reported that in earlier times there were two others, in Yerakas and Valanidia. The chrysobull of 1301 mentions one of these forests without further specifications.⁴⁰ Large oaks, which used to be found in various parts of the territory, have survived in certain places to this day, for example in the area of Charakas. There were also other varieties of oak, some bushy, growing in the wild, which provided various products, for example, those used for dyeing textiles, kermes in particular. The chrysobull of 1301 refers to the collection of kermes in Ganganneas, near Molaoi, and in Seraphon, more to the north, on Mount Parnon. It also mentions the production of acorns, which must have been considerable in the area of Prinikos.⁴¹

The extent of the seashore, its morphology, and the many ports and harbors made possible all sorts of activities connected with the sea, especially fishing. The silver bull of Theodore I, of 1390–91, mentions fish as one of three main categories of products in which the Monemvasiots traded: “meat,” “wine or fish.”⁴²

It is not possible to know if the imperial mentions of “lavishness of crafts” refer to any craft other than the production of silk and textiles. Silk is mentioned at the beginning of the fourteenth century along with products for dyeing, but its production, as well as that of other textiles, must have been much older. Repeated references in the imperial documents reveal the traffic in other kinds of textiles, some of which must have been manufactured in Monemvasia. Among the crafts were the treatment of skins and hides.

The iron deposits in Vatica and other areas were known since antiquity. They must have been exploited during the early centuries of the city, but certainly not during the

³⁸ MM 5:164, 166; Fasoulakis, “Η οἰκογένεια Καβάκη,” 47.

³⁹ MM 5:164, 166, 172. For the horses, cf. C. Sathas, *Documents inédits relatifs à l'histoire de la Grèce au moyen âge*, 9 vols. (Paris, 1880–90), 6:94.

⁴⁰ Belia, “1828,” 105; MM 5:164.

⁴¹ Kalligas, *Sources*, 224, 226.

⁴² MM 5:172. Another activity connected with the sea, the fishing of the murex (the porphyry shell), by special fishermen of the Lakonike peninsula, for the production of the precious dye, may have survived from earlier times. Zakythinos, *Despotat*, 2:251.

period of the Palaiologoi, when iron was imported from Crete. Lead, copper, and other ores are known to exist in the area of Molaoi and elsewhere, as well as the “krokeatis” stone, a sort of green porphyry. It is not known if it had been quarried during the Byzantine period.

Architecture developed greatly during the Byzantine period, and the craftsmen from Monemvasia had a very good reputation. The material mostly used during all periods, especially for the building of vaults, was poros stone. For centuries it was quarried systematically in many parts of the peninsula of Lakonike.⁴³ Bricks, on the contrary, were not much used, and almost never for the construction of vaults. There are two place names that suggest the production of ceramic products, which, among others, were necessary for the fabrication of special waterproof mortars or for the manufacture of utensils.⁴⁴

Before the thirteenth century, we can only assume from indirect evidence that the commercial activities of the Monemvasiots were equally important.⁴⁵ For the period after the Frankish occupation, the text that offers the greatest amount of information is the chrysobull of 1336. It deserves to be examined in comparison with other sources. The privileges of the chrysobull are bestowed upon groups of Monemvasiots who were dispersed in various places, Monemvasia, Constantinople, where they had moved recently from Pegai, and elsewhere, “wherever they might find themselves.” They moved around a very wide area, about which an idea is given by other more specific references: places near and around Constantinople, ports of Macedonia and Thrace, Bulgaria, the Peloponnese, the Aegean, the Black Sea, and elsewhere. They also frequented fairs, more especially those in the Peloponnese.⁴⁶

This information is confirmed by various additional sources. Monemvasiot merchants are mentioned as being active in many places: Monemvasia and Constantinople, the region of the Black Sea, Crete. Mavrozomis was a merchant in Monemvasia around 1316, Nicholas in Constantinople in the middle of the fourteenth century, John Daimoniannis was active in Bulgaria and the Black Sea on a ship owned by the Byzantine emperor.⁴⁷ They do not seem, however, to have extended their enterprises into parts of the Aegean such as Chios or into the Ionian Sea.

⁴³ The poros quarries situated nearest Monemvasia are the following: in Tigani, 3 km to the north; in Pratazia, today Hagia Paraskevi, 4 km to the south. The quarries in Hagios Phokas were also important in supplying Monemvasia. All three are situated near sea level and had a small harbor. Another quarry can be seen almost at sea level in the ancient and medieval settlement of Yerakas. An important quarry in the area of Vatica has retained the place name Latomeio, which is also the name of the village nearby. Another quarry with the same name is mentioned in the 1828 report near the sea opposite Elaphonesos.

⁴⁴ One place is near Monemvasia (Tsikalaria); another is at a distance of 11 km (Keramoti).

⁴⁵ Sp. Lambros, *Μιχαήλ Ἀκομινάτου τοῦ Χωνιάτου τὰ σφωζόμενα* (Athens, 1880), 2:136–37; Kalligas, *Sources*, 66–70. Cf. also Magdalino, *Manuel*, 149.

⁴⁶ There is absolutely no mention of a fair in Monemvasia. Cf. A. I. Lambropoulou, “Οἱ Πανηγύρεις στὴν Πελοπόννησο κατὰ τὴ Μεσαιωνικὴ ἐποχὴ,” in *Ἡ Καθημερινὴ Ζωὴ στὸ Βυζάντιο* (Athens, 1989), 298–300.

⁴⁷ The document issued in 1328 by Andronikos III for the Monemvasiots of Pegai shows similar activity. Schreiner, “Prostagma,” 207–13.

The chrysobull of 1336 specifies several of the products of Monemvasiot trade: livestock, agricultural products, especially wheat and wine, as well as salted meat, skins and hides, textiles, linseed, and felt. The document enumerates twenty-six special taxes from which the Monemvasiots were exempted, a list that hints at the production of some other products, such as olive oil, that are not mentioned.⁴⁸

Wheat was not produced in Monemvasia. There is, however, frequent mention in the sources of wheat trading carried out by Monemvasiots. Just one example worth mentioning is that of John Daimonoianis, who was able to supply Kaffa with wheat during the siege of 1386. The traffic in wine by Monemvasiots is also well documented. Large quantities of wine must have been exported from the port of Yerakas, which in the portulans is mentioned as Porto delle Botte or Porto Botte. In the fifteenth century there were Venetian merchants in Monemvasia exporting wine. On the other hand, the wine traded in Crete by Andrea and Dimitri da Malvasia in collaboration with Vannino Fecini, in 1336–37, does not seem to have been from Monemvasia.⁴⁹

Nicholas de Malvasia traded in fish in the Black Sea in 1289–90.⁵⁰ Imports of olive oil to Constantinople from Monemvasia in the middle of the fourteenth century are reported in detail. Andrea and Dimitri da Malvasia, apart from wine, also exported cheese from Crete with Vannino Fecini.⁵¹ The export of raw silk and kermes from Monemvasia is reported in a Florentine commercial manual of the fourteenth century.⁵² During the fourteenth century, iron was imported into Monemvasia from Crete by Monemvasiots, and in the fifteenth century Bessarion knew of the existence of mines in the territory of Monemvasia only from rumor.⁵³ Even planks were imported from Crete in the fifteenth century, as becomes evident from the permission given to Nicholas Eudaimonoianis in 1419.

Maritime Activities

The morphology of the city and its territory, its position in relation to sea routes, and the special conditions that prevailed since the seventh century favored maritime enterprises. A number of good ports of various sizes are found on the shore at distances that allowed easy connections between them, by sea and by land.⁵⁴ On the eastern

⁴⁸ Schreiner, "Prostagma," 219–21.

⁴⁹ Thiriet, *Délibérations du Sénat*, 2: nos. 1756, 1798, 1831, 2048; 3: nos. 2706, 2763; R. Morozzo della Rocca, *Lettere di mercanti a Pignol Zucchello, 1336–1350* (Venice, 1957), 7, 8, 10, 14, 15.

⁵⁰ M. Balard, *Gênes et l'outre-mer*, vol. 1, *Les actes de Caffa du notaire Lamberto de Sambuceto, 1289–1290* (Paris, 1973), no. 438.

⁵¹ Morozzo della Rocca, *Pignol Zucchello*, 7, 8, 10, 14, 15.

⁵² D. Jacoby, "Silk Production in the Frankish Peloponnese: The Evidence of Fourteenth-Century Surveys and Reports," in *Travellers and Officials in the Peloponnese: Descriptions, Reports, Statistics. In Honour of Sir Steven Runciman* (Monemvasia, 1994), 46.

⁵³ Gasparis, "Ἡ ναυτιλιακή κίνησις," 308; Zakythinos, *Despotat*, 2:250.

⁵⁴ The ports are shown fairly accurately in the most important portulans and maps of the 16th century, e.g., those by Giovanni Andrea Vavassore: British Library, maps 15.c.26(43); or by Gian Battista Agnese: Bon, *Morée franque*, pl. 9. They are also enumerated in detail in the 1828 report. Archaeological finds suggest the use of certain other ports as well.

shore, Kyparissi was a port important for the export of timber from the forests of Mount Parnon, which was necessary for the construction of ships. To the south, Yerakas was the most important port in the area and functioned as an arsenal for the Byzantine fleet. Most probably this was the place where shipyards were installed. The port of Palia Monovasia as well as other smaller harbors in the area, such as San Polo, Psifias, and Hagios Phokas, must have operated in combination with the port installations on the rock of Monemvasia. There were other good ports further south, in the area of Vatica, as well as two important ones on the west coast, Archangelos and Plytra or Xyli, a port "suitable to shelter a whole fleet." The Italians called it Porto Grana because of the export of kermes. Other smaller harbors, such as Elia and Kokkinia to the northwest, or Prophetis Elias and Hagia Marina near Cape Malea, were in use for local or seasonal needs.

Mount Parnon provided timber for shipbuilding, but so far there is no concrete information regarding this. However, the organized departure of the inhabitants to settle in Asia Minor, after the surrender of the city to the Franks, in the middle of the thirteenth century, would presuppose a large number of ships constructed locally. This departure, however, most probably put an end to the function of the Monemvasiot shipyards.

In the prooimion of the chrysobull of 1301, the emperor praises the activities of Monemvasiots as both sailors and merchants.⁵⁵ The text makes no special reference to the military aspect that characterized their maritime activities in earlier times and is emphasized in other Byzantine texts. In the mid-fourteenth century, the Monemvasiots are described as men who, in the past, had engaged in land and sea battles, whereas their interest in commerce was relatively recent. In the fifteenth century, Monemvasia is described as "having had the supremacy in all the seas that start from the pillars of Hercules . . . having crushed and sunk many and important forces and numerous fleets of Sicilians, Italians, Spaniards, many times."⁵⁶ Their repulsion of the attack of the Norman fleet against the city in 1147, one in a series of attacks against large cities of the Byzantine Empire, and the only one that was successfully repulsed, gives an idea of the efficiency of the Monemvasiots in naval military activities at that time. However, it is the activities of the Mavrozomis family, which was distinguished in campaigns mentioned by twelfth-century sources, that allow one to detect the presence and performance of people from Monemvasia in military operations in a large part of the Aegean and the Mediterranean.⁵⁷ For the thirteenth century, it is most likely that a large percentage of the skilled crews that Emperor John III Vatatzes attracted for the fleet organized in Asia Minor against the Latins was composed of Monemvasiots. There are, however, many indications that commercial activities coexisted with military ones before that time, and there is direct reference to Monemvasiot merchant ships in the twelfth century.

⁵⁵ Binon, "Macaire ou Phrantzès?" 306.

⁵⁶ Lambros, "Ἀναφοραί," 288.

⁵⁷ Cf. Magdalino, *Manuel*, 257–58.

The Frankish conquest brought a dramatic decrease in the naval activities of the city, perhaps a total abandonment of them by the inhabitants who remained home, "exhausted and without resources." After the return of Monemvasia to Byzantine sovereignty, a large part of the active population returned, encouraged by the central administration, and naval activities were revived. The vessels mentioned by the sources as being used by the Monemvasiots after the thirteenth century were, however, small and most probably constructed elsewhere. Most references are to *barche*, sometimes to the larger *ligna*. In the fourteenth century, the Monemvasiots are said to trade with *barche*, *ligna*, and *griparie*. In 1462 they traded in foodstuffs from nearby areas with their *fuste*, encountering many difficulties because of pirates.⁵⁸

The Monemvasiots themselves, however, had not only been merchants but pirates as well. They usually operated in the southwestern Aegean, between Euboea and Crete. Sometimes they attacked ships in Cretan ports or in more distant places. Their targets were small ships that served local commerce between the islands of the Aegean. The loot could be considerable. The list of Monemvasiot pirates contains the names of various members of important families of Monemvasia, for example, the Mamonas or Daimonoiannis. Among the rest, some were Italians, such as Petro Caravella or Guglielmo from Monemvasia. A certain Saladdin is mentioned, but this was most probably a nickname. This sort of activity was considerably reinforced when the crews were unemployed after the disbanding of the imperial fleet in 1285; a considerable number of experienced Monemvasiot sailors had settled in Constantinople after its recapture in 1261 and had served in the imperial fleet.

Another kind of piracy practiced by the Monemvasiots until the end of the thirteenth century was a special type of collaboration with the emperor, since the documents often call its practitioners *homines domini Imperatoris*. Using Monemvasia and other places as a base, they attacked Venetian ships, preventing their provisioning or hindering their trading, thus supporting the imperial fleet while enjoying the benefit of considerable loot for their own profit.

After 1325 no information exists on Monemvasiot pirates. Possibly they channeled their efforts more systematically toward trade, or they moved to larger centers, or their ships were destroyed during the great crisis in Monemvasia around 1390. Gradually other groups of pirates took their place in the Aegean; it was now the turn of the Monemvasiots to suffer from their attacks. Isidore, no longer a monk but a cardinal, donated from his deathbed a *galiota* to the city for which he had cared since his youth; he wanted to protect it from the fierce pirates, who at this point were no longer Monemvasiots but Turks or Catalans. This piece of information is found in documents of 1462, along with the negotiations for the surrender of the city to the Venetians. At this point "the state which was once mistress of Greece, which had invaded Asia and the East with powerful fleets and subdued a large part of the world, . . . could not stand unless it sought lords from the West, . . . those . . . whose . . . power it had once de-

⁵⁸ ASV, Senato Secreta, XXI, fols. 103–104r, 12-VII-1462.

spised.” Pope Pius II “was so moved” by these thoughts “that he wept as he reflected on the uncertainty of earthly things.”⁵⁹

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⁵⁹ Ibid.; Aeneas Silvio Piccolomini, “The Commentaries of Pius II: Books IV and V,” ed. W. D. Gray and H. V. Faulkner, trans. F. Gregg, *Smith College Studies in History* 30 (1946): 321.

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Byzantine Shipwrecks

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Roughly eighty Byzantine shipwrecks have been reported in the archaeological literature but only some thirty in any detail; of the latter, about a dozen are either too early or marginal in interest for inclusion in this chapter. In the western Mediterranean there are two wrecks of ships carrying as cargo a type of large, cylindrical amphora (Keay 62) used for the export of North African olive oil during the latter part of the fifth and the first half of the sixth century. The amphoras on one of these wrecks, off Filicudi in the Aeolian Islands,¹ were lined with resin, suggesting that they did not in this instance contain olive oil. This wreck may have occurred before the Byzantine recovery of North Africa, but the other one, at Anse de la Palu off Port-Cros island on the southern coast of France, may date to the second half of the sixth century.² The latter ship was also carrying some wine amphoras from the eastern Mediterranean, including cylindrical (Late Roman [LR] 1) amphoras most probably from the north-eastern Mediterranean, globular (LR 2) amphoras from the Aegean or Black Sea region, and cigar-shaped (LR 4) amphoras from Gaza.

Soon after the recovery of North Africa from the Vandals in 533, a ship carrying 200–300 tons of prefabricated marble architectural elements belonging to the columns, altar, altar canopy, choir screen, and pulpit of a small basilica sank near the port of Marzamemi on the southeastern tip of Sicily.³ These marbles and ones very close to them in style in churches at Ravenna and Cyrenaica are relics of Justinian's attempt to promote religious unity within the empire through a standardization of church architecture and constitute evidence that the long-distance shipment by sea of partially finished objects of stone, a practice well documented by Roman shipwrecks with cargoes of unfinished architectural elements, sarcophagi, and statues, continued into early Byzantine times.

There are several known wrecks of ships that had been carrying cargoes probably of wine from the eastern Mediterranean at some time during the sixth or the early sev-

¹ For a bibliography and a summary of what is known about the wreck, see A. J. Parker, *Ancient Shipwrecks of the Mediterranean and the Roman Provinces* (Oxford, 1992), no. 401.

² Parker, *Ancient Shipwrecks*, no. 782; a preliminary publication of the wreck is scheduled to appear in *Etudes massaliètes* 5.

³ Parker, *Ancient Shipwrecks*, no. 671.

enth century. A wreck off Cape Andreas at the northeastern end of Cyprus contains a substantial number of LR 1 amphoras of this general date; the interiors of the jars are lined with resin.⁴ Cargo and ship's pottery taken from a late sixth-century wreck off Iskandil Burnu on the western end of the Knidian peninsula (southwest Asia Minor) indicate that the ship was probably Palestinian and transporting wine in bag-shaped and LR 4 amphoras, the most common local-wine containers for south Palestine and Gaza respectively. A kosher casserole with sealed lid possibly belonged to a Jew on board.⁵ A ship carrying bag-shaped amphoras, set on rope rings and packed in straw, sank while still in Palestine at the port of Dor;⁶ wreck excavation was begun in 1994.⁷ The wreck had been tentatively dated by the shape of the amphoras to the beginning of the seventh century, but carbon 14 dates of wood samples from the ship's keel now suggest that the wreck occurred perhaps as much as a full century earlier. The ship appears to constitute our earliest example of a medieval Mediterranean hull without mortise-and-tenon joints in its planking, a cost-cutting economy probably made possible by the ship's very small size.

An early seventh-century shipwreck, excavated at Saint Gervais on the southwest coast of France, gives apparent evidence of Levantine merchants or seamen involved in the local transport of pitch and grain. Ship's pottery, including two pitchers with Greek graffiti and a Gaza amphora, was mainly from the eastern Mediterranean.⁸

Shortly after the Persian withdrawal from the Aegean in 626, a ship with some eight hundred amphoras of wine set out from an eastern Aegean port and sank off the island of Yassı Ada while sailing southward between Asia Minor and Kos; the wreck has been excavated.⁹

Economy took precedence over appearance in the ship's construction. Wales girdling the sides and a majority of timbers lining the hull interior were little more than half-logs. Construction methods employed were more economical than those of a century or two earlier. Mortise-and-tenon joints that edge-joined hull planking together were much smaller, more widely spaced, and now used only up to the waterline. The hull planking was no longer fastened to frames by wooden trunnels and large clench nails, but by light nails that barely penetrated halfway into frames. In contrast to long-lived Greco-Roman vessels, this ship was a much more affordable vessel lasting just long enough to turn a good profit. The hulls of the Dor and Saint Gervais ships, as well as of a seventh-century lighter for off-loading heavy cargo excavated at Pantano Longarini in southeastern Sicily,¹⁰ give similar evidence of more economical shipbuilding methods.

⁴ Ibid., no. 204.

⁵ Ibid., no. 518.

⁶ Ibid., no. 367.

⁷ S. Wachsmann et al., "The 1994 INA/CMS Joint Expedition to Tantura Lagoon, Israel," *INA Quarterly* 22.2 (1995): 3–20.

⁸ Parker, *Ancient Shipwrecks*, no. 1001.

⁹ Ibid., no. 1239.

¹⁰ Ibid., no. 787. The hull remnants were long thought to belong to a large merchant ship, but a new reconstruction, not yet published, reveals the vessel's true nature.

The ship's galley had a tile roof and tile firebox with iron grill and was equipped to prepare and serve food and drink to a considerable number of people, remarkable in an age when passengers normally provisioned themselves. Utensils included 21 cooking pots, 2 cauldrons and a bake pan of copper, 18 ceramic pitchers, and 4 or 5 table settings; a well-stocked larder contained 16 pantry jars.

The cargo consisted of some seven hundred globular LR 2 amphoras stacked three deep and somewhat more than a hundred relatively small, cylindrical LR 1 amphoras placed horizontally between the necks of the globular jars in the top layer. The recovery on average of just under a dozen grape seeds from amphoras still intact suggests that most, or all, of the amphoras had been carrying low-grade wine. Approximately 80% of the globular jars belong to four closely related types recently made; the rest, to some forty different types with in some instances late sixth-century forms. Similarly, there are a dozen different types of cylindrical amphoras. Most, or all, of the amphoras had seen earlier use. Many newer globular ones had earlier carried olives, possibly preserved in sweet wine. Some older globular jars had held lentils. Several dozen different marks of ownership occur on the amphoras; some jars had had more than one owner. The amphoras show little sign of prolonged use; it is likely that the older ones had served for some time as sedentary storage jars.¹¹

An inscription on a steelyard indicates that the ship's captain was a priest (πρεσβύτερος ναύκληρος). The ship may have belonged to the church and been designed to transport churchmen as well as cargo. It is hard to imagine how purely commercial transactions could have brought together on one ship amphoras of so many different types, ages, and sources. Taxes in kind are a more likely agent.¹² Allusions to the Christian faith among amphora graffiti may reflect the church's involvement.¹³ A contemporaneous church complex on Samos with a press and globular and cylindrical amphoras much like those on the ship has been cited as evidence for a church role in the provisioning of military bases.¹⁴ Perhaps the ship was carrying wine intended for troops then involved in Herakleios' campaign against the Persians in the East. A wreck off the Knidian peninsula also with both LR 1 and 2 amphoras may be a few decades later in date.¹⁵

¹¹ F. H. van Doorninck, Jr., "The Cargo Amphoras on the Seventh Century Yassı Ada and the Eleventh Century Serçe Limanı Shipwrecks: Two Examples of a Reuse of Byzantine Amphoras as Transport Jars," in *Recherches sur la céramique byzantine*, ed. V. Déroche and J.-M. Spieser, *BCH*, suppl., 18 (1989): 247–53. P. G. van Alfen, "New Light on the 7th-c. Yassı Ada Shipwreck: Capacities and Standard Sizes of LRA1 Amphoras," *JRA* 9 (1996): 189–213.

¹² Taxes in kind as a possible explanation for the nature of the cargo was first suggested by P. Arthur, "Aspects of Byzantine Economy: An Evaluation of Amphora Evidence from Italy," in *Recherches sur la céramique byzantine* (as above, note 11), 87.

¹³ Arthur, "Aspects," 85, cites Christograms and the like on late Roman and Byzantine vessels as possible reflections of ecclesiastical control.

¹⁴ C. Steckner, "Les amphores LR 1 et LR 2 en relation avec le pressoir du complexe ecclésiastique des thermes de Samos," in *Recherches sur la céramique byzantine* (as above, note 11), 65.

¹⁵ Parker, *Ancient Shipwrecks*, no. 352; for the date, see C. Pulak, "1987 Yılı Sualtı Araştırmaları," in *VI. Araştırma Sonuçları Toplantısı* (Ankara, 1988), 3.

A severe reduction in long-distance trade during the latter part of the seventh and the eighth century is paralleled by an absence of Byzantine wrecks that can be confidently assigned to this period. Two wrecks of the ninth or early tenth century contribute evidence of the subsequent resurgence of maritime trade and increased economic importance of the Byzantine Crimea. One wreck, at Bozburun on the southwest coast of Asia Minor, is of a ship carrying Crimean wine amphoras; its excavation ended in 1998.¹⁶ The other wreck, off Mljet in Dalmatia, has yielded an assortment of Byzantine amphoras, including some from the Crimea, and glassware with both Byzantine and Islamic parallels.¹⁷

A substantial increase in tenth- and eleventh-century maritime commerce is indicated by a sharp rise in frequency of known Byzantine wrecks belonging to this period.¹⁸ These wrecks occur along the sea-lanes between Constantinople and southern Russia, Trebizond, Syria, and the Adriatic. The main type of amphora found on them has a short neck, small earlike handles, and an almost globular piriform body.¹⁹

One of these wrecks is of a 15-m-long ship that sank at Serçe Limanı on the Asia Minor coast north of Rhodes in the latter 1020s while sailing westward with cargoes from Fatimid Syria; the wreck has been excavated.²⁰ Although the hulls framing pattern shows influence from central Europe, perhaps via the Danube, Byzantine units of measure were used in the hull's construction, suggesting that the ship was built somewhere not too far from Constantinople. No mortise-and-tenon joints were employed in the planking, which was fastened to already erected framing in the modern way. Very simple lines giving the hull a flat bottom and steep, straight sides produced a boxlike hold that maximized capacity (some 30 tons). The vessel had been well maintained and equipped for repairs and defense against piracy. Fishnet weights with Christian symbols and pork consumption suggest that the crew was Christian.

Commercial equipment on board included a Byzantine steelyard, three balances, glass dinar and dirham weights, and two large sets of balance-pan weights, one Byzantine and the other Fatimid. A paucity of coins—3 one-quarter dinars, 15 dinar-coin clippings (in place of silver coins), and some 40 Byzantine copper coins—coupled with 3 Byzantine lead seals for documents suggest the possible use of letters of credit.

The cargoes were diverse and often small, as shipments often are in contemporaneous Geniza documents.²¹ They included some 3 tons of glass cullet, some 80 or more items of glassware, several dozen cooking pots, several dozen splash-ware and sgraffito-

¹⁶ F. M. Hocker, "Bozburun Byzantine Shipwreck Excavation: The Final Campaign, 1998," *INA Quarterly* 25.4 (1998): 3–13. See also Parker, *Ancient Shipwrecks*, no. 111, where the date cited is too early; similar amphoras at Sarkel are dated to the 9th and early 10th centuries. S. A. Pletneva, "Keramika Sarkela–Beloi–Vezhi," *Materialy i issledovaniia po arkheologii SSSR* 75 (1959): 266.

¹⁷ Parker, *Ancient Shipwrecks*, no. 703.

¹⁸ These wrecks include Parker, *Ancient Shipwrecks*, nos. 70, 385, 498, 557, and 1139.

¹⁹ Type I in N. Günsenin, "Recherches sur les amphores byzantines dans les musées turcs," in *Recherches sur la céramique byzantine* (as above, note 11), 269–71.

²⁰ Parker, *Ancient Shipwrecks*, no. 1070.

²¹ S. D. Goitein, *A Mediterranean Society*, vol. 1, *Economic Foundations* (Berkeley, 1967), chaps. 3 and 4.

ware glazed bowls, several half-dozen lots of jugs and gargoulette pitchers, most of just over a hundred shipboard amphoras (almost all probably carrying wine), raisins, sumac, and unidentifiable perishable cargo occupying the forward half of the hold.

The glass cullet (2 tons of raw glass and 1 ton of broken glassware and glassmaking waste) replaced stone ballast. Shipping glass cullet cheaply as ballast often made economic and technical good sense, since melting glass requires a much lower temperature than making glass and a desired kind of glass can not always be made from locally available raw materials. The Egyptian glassware at the Corinth glass factories (see p. 597) and apparent Syrian glassware in a glass factory at Preslav in Bulgaria²² can be viewed in this light. Another Byzantine shipwreck with Syrian glassware cullet similar to that from Serçe Limanı lies 30 km to the east.²³

Most of the cargo amphoras were piriform, and many of these were in design and fabric like piriform jars made in kilns recently discovered on the north coast of the Sea of Marmara,²⁴ a body of water particularly rich in wrecks with such amphoras. A survey of one of these wrecks just published has revealed that the ship carried at least twenty thousand amphoras of a relatively small size.²⁵ Perhaps the size range of transport jars was somewhat slow in adjusting to the new requirements of a greatly increased volume of trade in wine.

The half-dozen or so merchants who owned the Serçe Limanı cargo amphoras were accustomed to using their amphoras over and over again as transport jars, selling the contents but keeping the jars and carving down damaged rims and handles to minimize further damage; a high incidence of carved amphoras in museum collections indicates that this was a common practice. Graffiti on the Serçe Limanı amphoras give evidence that the merchants and many of their amphoras were from a locale with a Byzantine-Slavic population, presumably in the Sea of Marmara region.

Wrecks with amphoras can sometimes yield important information concerning capacity systems and sizes, as well as marketing and standardization practices. The Serçe Limanı piriform amphoras, for example, belong to more than two dozen distinct capacity sizes, some for red and others for white wine, ranging from 15 to 60 Byzantine pounds (λίτραι) of wine and belonging to three interrelated capacity systems in which capacities increase at 3- or 5-λίτραι intervals.²⁶ Such a multiplicity of sizes stands in stark contrast to the few basic sizes employed in the Roman period or earlier and seems to imply profound changes in the marketing of wine. Accurate capacities were achieved through a strict control of both external jar dimensions and the amount of clay used.

²² G. Džinkov, "Srednovekovna stuklarska rabotilnitsa v Patleina" (Medieval glass workshop in Patleina), *Izvestiia-Institut* 26 (1963): 63, fig. 17.

²³ C. Pulak, *INA Newsletter* 12.2 (1985): 2.

²⁴ N. Günsenin, "Ganos: Centre de production d'amphores à l'époque byzantine," *Anatolia antiqua* 2 (1993): 193–201; a kiln that produced such amphoras was found on Marmara (Prokonnesos) in 1994.

²⁵ N. Günsenin, "1994 yılı Marmara Adaları Araştırması," in *XIII. Araştırması Sonuçları Toplantısı* (Ankara, 1996), 357–59, figs. 1 and 2.

²⁶ F. H. van Doorninck, Jr., "Giving Good Weight in Eleventh-Century Byzantium: The Metrology of the Glass Wreck Amphoras," *INA Quarterly* 20.2 (1993): 8–12.

Although the amphoras are of various capacity sizes, almost all have a mouth that would have accommodated a stopper of just one standard size. A new study of the seventh-century Yassı Ada amphoras now in progress will present considerable evidence of a λίτρα-based capacity system and that a significant increase in the number of capacity sizes used and a standardization of stopper sizes was then already under way.

Byzantine sgraffito wares were important exports to the Levant, Russia, and Italy during the twelfth and thirteenth centuries. Several known shipwrecks might contribute significantly to our knowledge of the production centers and carriers involved in this trade were they thoroughly excavated and studied. One, already partially excavated, is of a mid-twelfth-century ship that sank off Pelagونيسos in the Northern Sporades while carrying thousands of plates, bowls, and cups like those of the fine, spiral, and developed styles found at Corinth and Athens; more than fifty amphoras and six millstones possibly represent secondary cargoes.²⁷ A late twelfth-century wreck off Skopelos in the Northern Sporades²⁸ and an early thirteenth-century wreck off Kastellorizon near the southern coast of Asia Minor,²⁹ both pillaged sites, have cargoes of a Byzantine sgraffito ware called Aegean Ware.

The type of Byzantine amphora most often found on twelfth- and thirteenth-century wrecks has a slender, elongated piriform body, tall neck, and vertical handles that arch high above the mouth.³⁰ Wrecks with such amphoras occur on the sea-lanes between Constantinople and Russia, Trebizond, Syria, and Italy.³¹ It would be of great interest to know the nationality of the ships involved and where they had taken on their cargoes. Unfortunately, only one of these wrecks has been even partially excavated.³² The ship, which sank off the Syrian coast at Tartous, was carrying about five thousand amphoras that were very carefully stacked vertically in at least five layers in the hold with all handles set athwartships. Light-timbered bulkheads divided the hold into compartments, probably to increase cargo stability.

²⁷ Parker, *Ancient Shipwrecks*, no. 796.

²⁸ *Ibid.*, no. 1099.

²⁹ *Ibid.*, no. 538.

³⁰ Type III in Günsenin, "Recherches," 271–74.

³¹ They include Parker, *Ancient Shipwrecks*, nos. 117, 361, 1110–11, 1128, and 1136. For additional information on the distribution of this amphora type, see Günsenin, "Recherches," 271–74, and S. Tanabe et al., *Excavation of a Sunken Ship Found off the Syrian Coast: An Interim Report* (Kyoto, 1989), 66–68.

³² Tanabe et al., *Excavation*.

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Part Five

Economic Institutions and the State

Byzantine Money: Its Production and Circulation

Cécile Morrisson

Δύο τοίνυν τούτων τὴν Ῥωμαίων συντηρούντων ἡγεμονίαν, ἀξιομάτων φημι καὶ χρημάτων, καὶ τινος ἔξω τρίτου, ἔμφορος περὶ ταῦτα ἐπιστάσις καὶ τοῦ λογισμῶ χρησθαι περὶ τὰς διανεμήσεις.

Michael Psellos, *Chronographie*, ed. Renauld, 1:132

The two pillars of Byzantine rule (dignities and riches) celebrated by Michael Psellos at the beginning of his lengthy exposition concerning Constantine Monomachos and his prodigal ways, which he considered with hindsight to have started the crisis that came at the end of the eleventh century, are only the two sides of one and the same source of power: wealth. This wealth was distributed to those who held dignities and offices and was stored in the imperial treasury mainly in monetary form, although some types of silk and other luxury items, the product of imperial monopolies or workshops, served to complement and sometimes substitute for imperial payments. In other words, they were quasi-money.¹

In any case, coinage may be considered the basic form of money in Byzantium, given the relatively limited role played by credit. Credit certainly existed: archival documents, papyri and *praktika*, and literary sources show how it developed during the sixth and seventh centuries (consumer credit, of course, as well as some forms of credit transfer implying delays in payment), persisted during the middle Byzantine period (e.g., maritime loans), and increased in scope from the thirteenth century on.² Both banking and bankers, and Byzantine businessmen in general, were not as primitive as has sometimes been implied and were able to take on the not inconsiderable role of granting credits to individuals and, possibly, the state, on the occasion of tax collection. Thus Patrikiotes, who made a fortune as a tax collector, was able to place 100,000 hyperpyra and movable goods to the value of 40,000 hyperpyra at John Kantakouzenos' disposal in 1341, to "complete and even increase the fiscal resources destined for

This chapter was translated by Sarah Hanbury Tenison.

¹ See below, 943.

² See, for instance, *POxy* 1908, line 17 (6th or 7th century), *POxy* 2010, line 1 (618); G. Dagron, "The Urban Economy, Seventh–Twelfth Centuries," *EBH* 434–38; N. Oikonomides, *Hommes d'affaires grecs et latins à Constantinople* (Paris, 1979), 54–68.

the campaign.”³ However, these “money-men” were not in a position to effect a significant increase in the monetary mass or the velocity of coin circulation. Thus we cannot speak of bank money, which is scarcely surprising, given that it developed late in the European economies as well.⁴

Consequently the predominance of coinage, in Byzantium as in the other medieval economies, entailed a certain lack of flexibility in the adjustment of the supply to the demand for means of payment. Nevertheless, thanks to its experience inherited from the Roman tradition and to a degree of sophistication in its financial acumen (though we should be wary of attributing to the Byzantines the will and ability to conduct what we would call monetary policy);⁵ the Byzantine Empire was capable of making a durable monetary system function for more than a thousand years, from Constantine to 1453, and *a fortiori* during the nine centuries considered here, because of its relative flexibility. The transformations to this system enabled it to adapt, to some extent, to a context that was evolving in response to numerous negative factors (such as political and military events involving increased expenditure, the loss of tax returns and, possibly, of access to sources of precious metals) as well as positive ones (conquests that secured increased resources, treasure, followed by tribute and mineral products, periods of peace that provided security and favored a degree of growth) and, finally, that was influenced by international monetary movements. In fact, money was both product and instrument of a complex and developed financial and fiscal organization that made a powerful contribution to the economic integration of a huge territory, as it had done in the Roman period, as well as enabling a minimum of exchanges to persist even during the darkest periods of the empire’s history.

I begin by examining matters connected with the money supply, meaning the conditions of its production and the evolution of the Byzantine monetary system, as well as its relations with contemporary coinages and, in the second part, issues relating to demand, meaning the elements and evolution of the circulation of money, the degree of monetization, as well as the internal and external diffusion of the coinage. This particular line of inquiry is not anachronistic, provided every variation and restriction imposed by the historical context and the way it evolved is brought to bear on the analysis. I have tried to do this, while asking the reader to bear in mind that what follows applies, *mutatis mutandis*, within a medieval environment. As John Hicks has emphasized, economics can supply a vision of the logical processes at work in history,

³ *Ioannis Cantacuzeni eximperatoris Historiarum libri quattuor*, ed. L. Schopen, 3 vols. (Bonn, 1828–29), 2:59, 62 (III. 8) (hereafter Kantakouzenos): ταῖς ἐκ τῶν δημοσίων ἀποτεταγμέναις αὐτοῖς προσόδοις τὰ ἐλλείποντα ἀναπληρῶν ἢ καὶ προστιθεῖς.

⁴ Bank money (scrip) played a very limited role for a long time in modern economies; it only developed in France, for example, in the mid-19th century and at a very slow rate (from 8.9% of total monetary stocks in 1847 to 12% in 1873 and 45% in 1914). F. Caron, *Histoire économique de la France, XIXe–XXe siècles* (Paris, 1981), 56.

⁵ For Byzantine knowledge of monetary matters, see A. E. Laiou, “Economic and Noneconomic Exchange,” *EHB* 693–96.

at the very least for those questions that can be treated in terms of statistical uniformity, even in the absence of numerical data.⁶

The Money Supply

Monetary Production and Its Administrative Organization

The production and output of coins were dictated by the needs of the public finances and were organized within the framework of the fiscal administration, as M. Hendy has demonstrated in several works, summarized in his *Studies in the Byzantine Monetary Economy* in 1985.⁷ Tables 1–3 in the text sum up the different stages of this organization.

The main features of the administrative organization of monetary production were first established by Diocletian and Constantine and were still in existence at the beginning of the seventh century. Minting (Table 1 and Fig. 1) was one of the important functions of the *comes sacrarum largitionum*, and, until Justinian's reign, the procurators of the mints remained under his authority.⁸ Gold and silver minting was restricted to the mint of the *comitatus*, in effect, the one in the capital, and was delegated to mints in the prefectures of Illyricum, Italy, and Africa. The *comitatus*' theoretical monopoly was noted on the inscription of the solidus and its fractions, which were invariably (apart from a few exceptions)⁹ marked with the stamp CONOB (Con[stantinopoli] ob[ryziacus]: fine gold solidus of Constantinople). For a long time, this uniform mark impeded or delayed the identification of these provincial issues, for which purpose numismatists relied on stylistic analysis, notably the comparison with the bronze coinage bearing the mark of its provincial mint, in conjunction with the study of provenances. Our information in this field has advanced regularly since P. Grierson and J. Lafaurie began their pioneering studies in the 1960s, to the synthesis presented by W. Hahn in *Moneta Imperii Byzantini* (MIB) and the corpus on Thessalonike by M. Metcalf and on Carthage by C. Morrisson in *Studies in Early Byzantine Gold Coinage* (1988).¹⁰ The Thessalonike mint production, which was continuous between the late fifth and early seventh centuries

⁶ J. Hicks, *A Theory of Economic History* (Oxford, 1969), 2–5.

⁷ M. F. Hendy, *The Economy, Fiscal Administration, and Coinage of Byzantium* (Northampton, 1989), arts. 4–8; idem, *Studies in the Byzantine Monetary Economy c. 300–1450* (Cambridge, 1985), 371–447.

⁸ R. Delmaire, *Largesses sacrées et res privata: L'aerarium impérial et son administration du IV^e au VI^e siècle* (Rome, 1989).

⁹ TESOB or THSOB disappeared from solidi of Thessalonike from Zeno's reign on. A unique solidus of Justinian in Carthage bears the mark ΛΦΡ[ικη]. Other coins of Justinian with the mark ROMOB are known, as is a rare solidus of Justin II with ΛΛΖOB.

¹⁰ The three volumes of W. Hahn, *Moneta Imperii Byzantini* (Vienna, 1973–81) (hereafter MIB), and idem, *Money of the Incipient Byzantine Empire (Anastasius–Justinian I)* (Vienna, 1999), constitute the best available discussion, although there is no agreement over some identifications (e.g., the attribution of solidi to Cyprus or Kherson). Cf. C. Morrisson, *RN*, 6th ser., 16 (1974): 185–90; 17 (1975): 196–99; 25 (1983): 217–25, or S. Bendall, *The Celator*, October 1989: IV, XXII–XXIII, with regard to ideas adopted by Hahn in his introduction to *Studies in Early Byzantine Gold*, ed. W. Hahn and W. E. Metcalf (New York, 1988).

Table 1
Monetary Production at the Beginning of the Seventh Century

Administrative Prefecture/Exarchate	District Diocese/Province	Mints (temporary mint)	Metals Minted
East	Thrace	—	
	Constantinople	Constantinople	AV, (AR), AE
	Pontos	Nikomedea	AE (→ 629/30)
	Asia	Kyzikos	AE (→ 629–630)
	Orient	Antioch	AE (→ 610)
	(Isauria)	(Seleukia)	AE (→ 612–618)
	Egypt	Alexandria	AE (→ 646)
Illyricum	Dacia	—	
	Macedonia	Thessalonike	AV, AE (→ 629–630)
Africa	Africa	Carthage	AV, AR, AE (533–695)
		(transferred to Cagliari)	AV, AE (695–720)
		(Cartagena)	AV (ca. 550–ca. 625)
Italy	Italy	Ravenna	AV, AR, AE
	Rome	Rome	AV, AR, AE
(<i>Quaestor sacri palatii/ Comes sacri patrimonii</i>)	Sicily	Catania	AV, AE
(Quaestura exercitus)	(Cyprus)	(Constantia)	AE (626–629)
		Kherson	AE (→ 658/9)

Note: AE = copper; AR = silver; AV = gold.

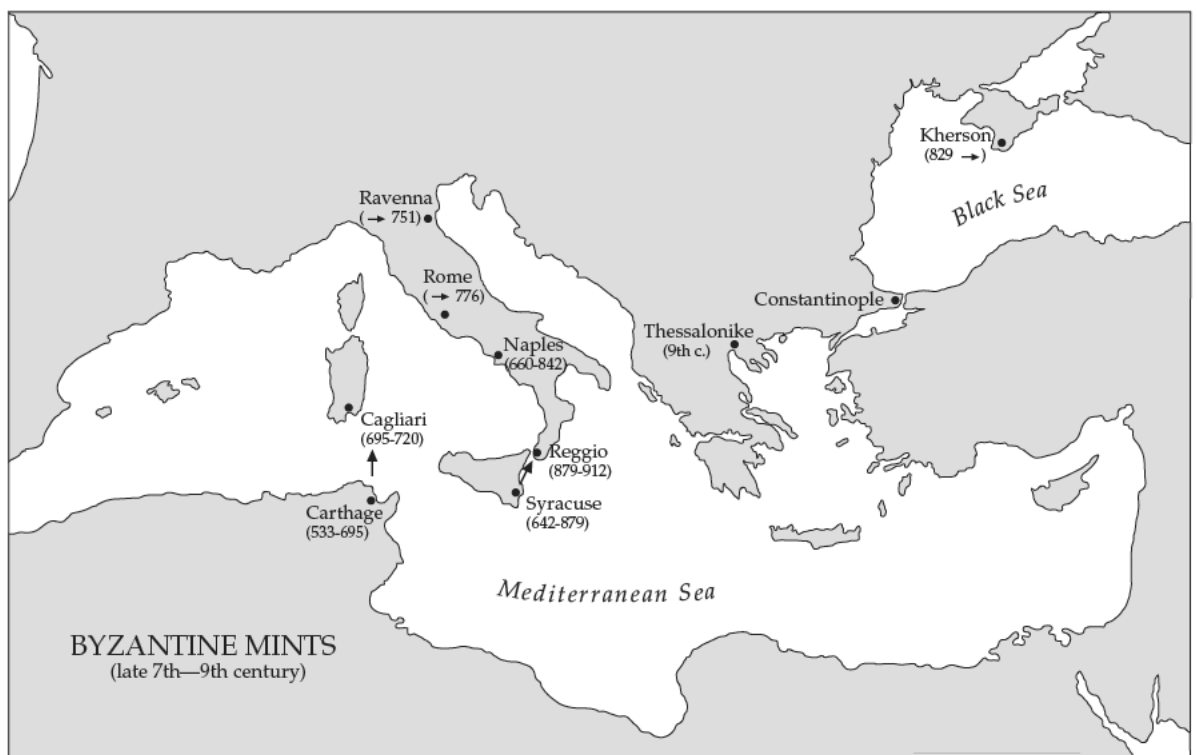
under Herakleios, has been partly individualized, thanks to a large find discovered at Thessalonike in 1948.¹¹ Carthage began to strike a gold coinage in 537/8, four years after the reconquest, as has been established by numerous local finds. It continued until the fall of the city in 695. Sicilian issues were outside the framework of the prefectures and subsequently of the exarchates. Though clearly individualized from the time of Constans II on, they were in fact earlier, as the Monte Judica hoard suggests, which allows us to push the date of the first minting of solidi to the reign of Justin II, at least.¹² In Spain, the minting of the rare debased tremisses, which is known for the

¹¹ M. Oeconomides and J. Touratsoglou, "The 1948 Thessaloniki Hoard of 6th-Century Byzantine Coins: A Contribution to the Study of the Mint of Thessaloniki," *Numismatica e Antichità Classiche. Quaderni Ticinesi* 8 (1979): 289–312.

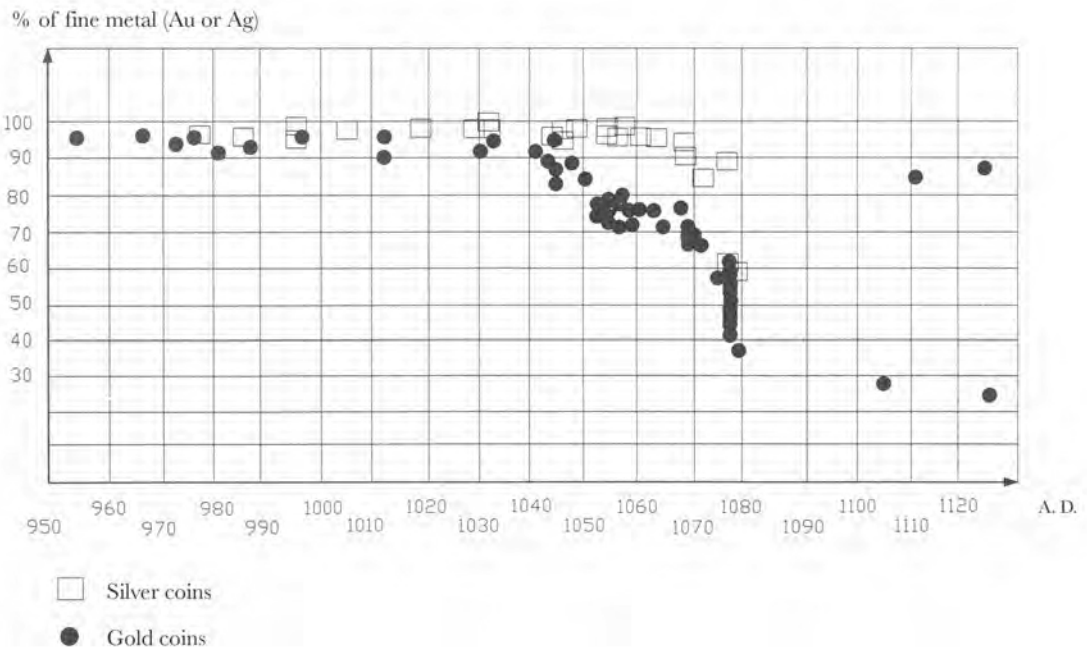
¹² W. Hahn and N. Fairhead, "The Monte Judica Hoard and the Sicilian *Moneta Auri* under Justinian I and Justin II," in *Early Byzantine Gold* (as above, note 10), 29–38.



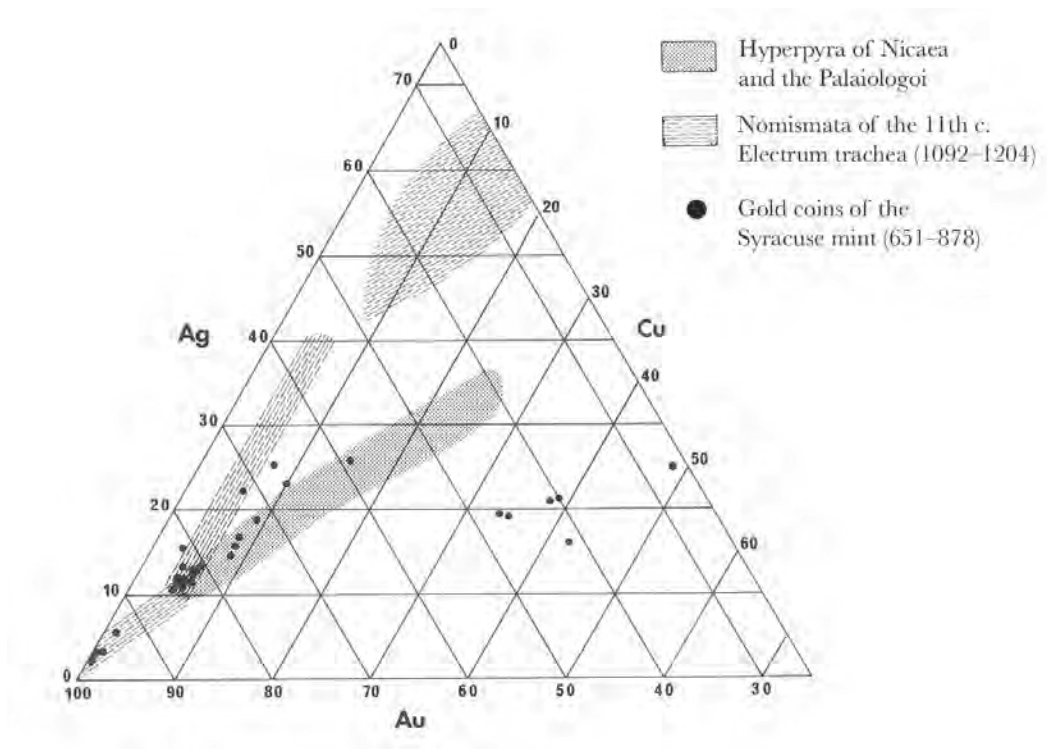
1a. Byzantine mints, 6th and early 7th centuries



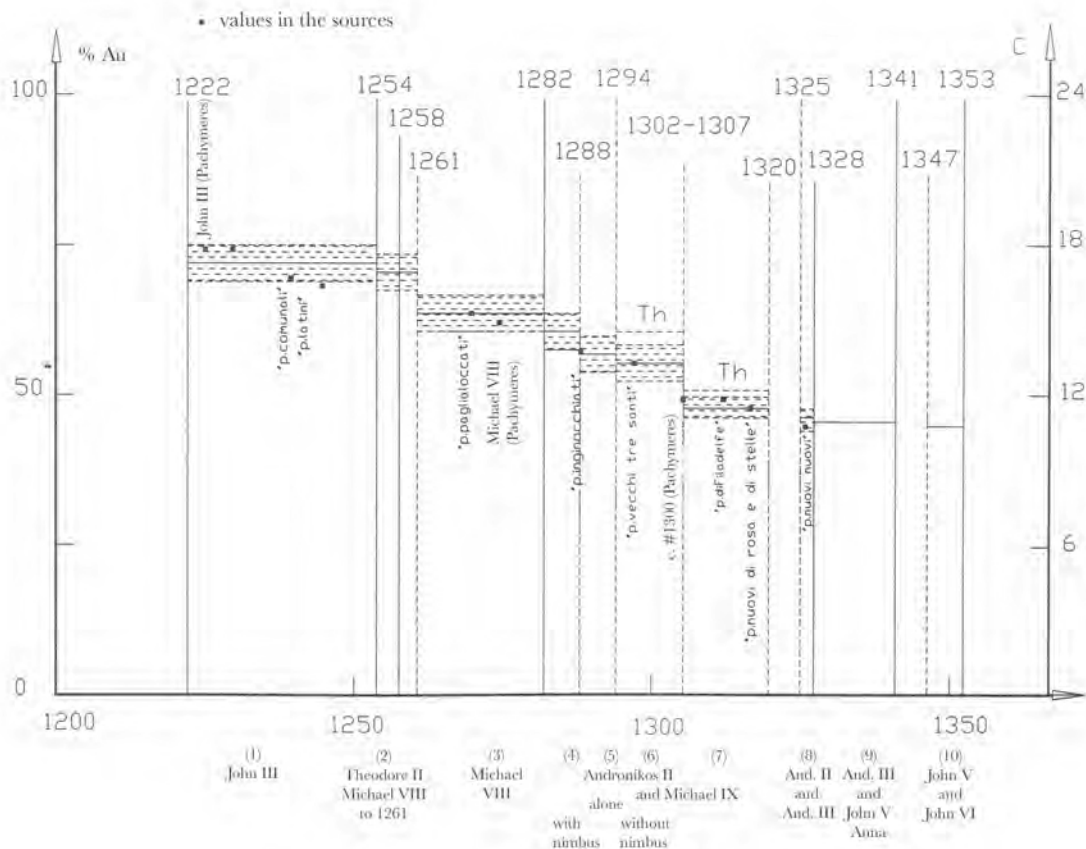
1b. Byzantine mints, late 7th—9th century



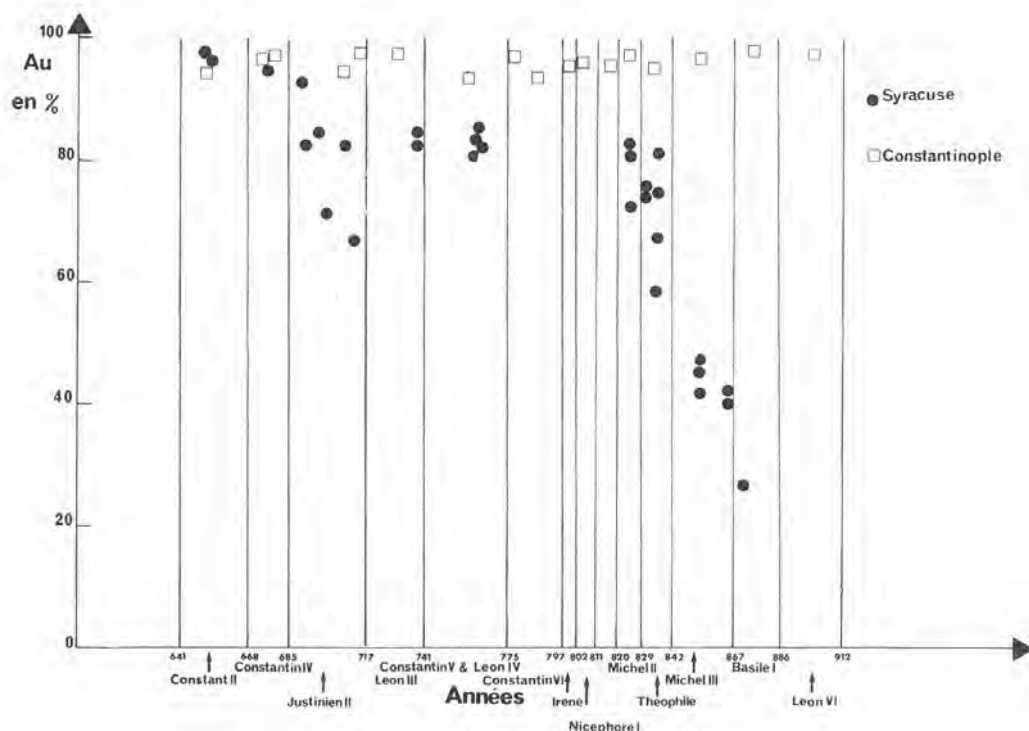
2. The debasement of the Byzantine gold and silver coinages (after C. Morrisson, *Monnaie et finances à Byzance: Analyses, techniques* [Aldershot, 1994], art. IV, p. 300)



3. The different processes of debasement of gold coinage at Byzantium (after Morrisson, *Monnaie*, art. X, p. 280, fig. 3)

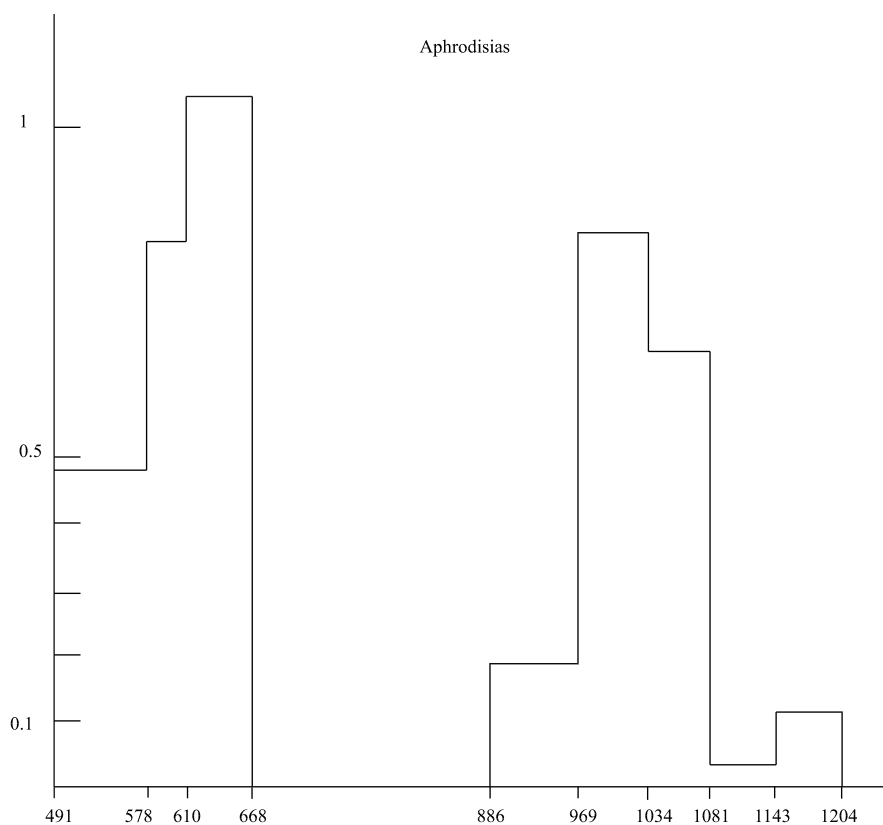


4. The last debasement of the hyperpyron (1222–1354) (after Morrisson, *Monnaie*, art. IV, p. 310)
Dots indicate the values (in carats) given by Pachymeres and Pegolotti (the coin names given by the latter are shown vertically). Shaded areas show the range of values from analyses. “Th” and the dotted lines below it are the slightly higher values measured on hyperpyra attributed to Thessalonike.

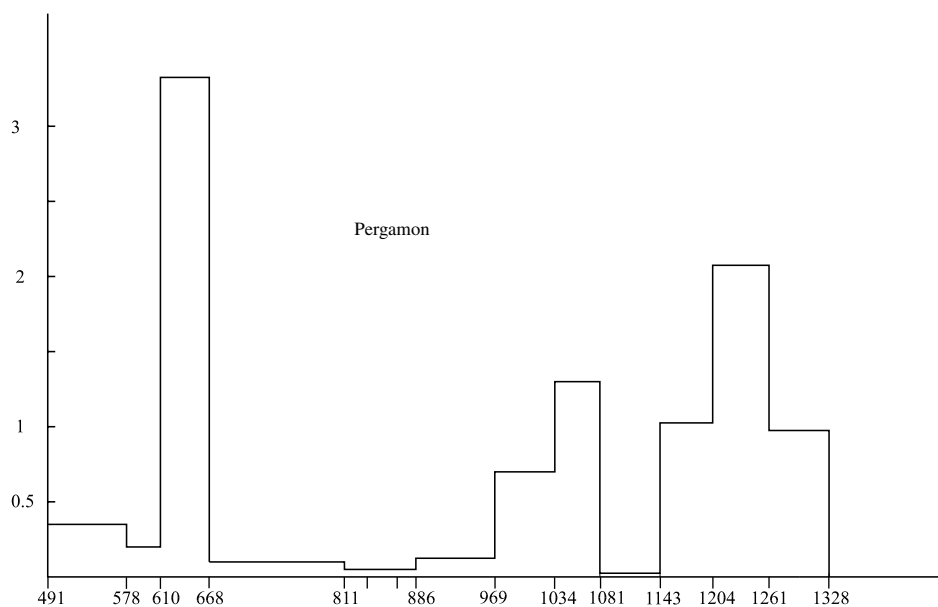


5. The fineness of the gold coinage at Syracuse (642–879) (after Morrisson, *Monnaie*, art. X, p. 280, fig. 2)

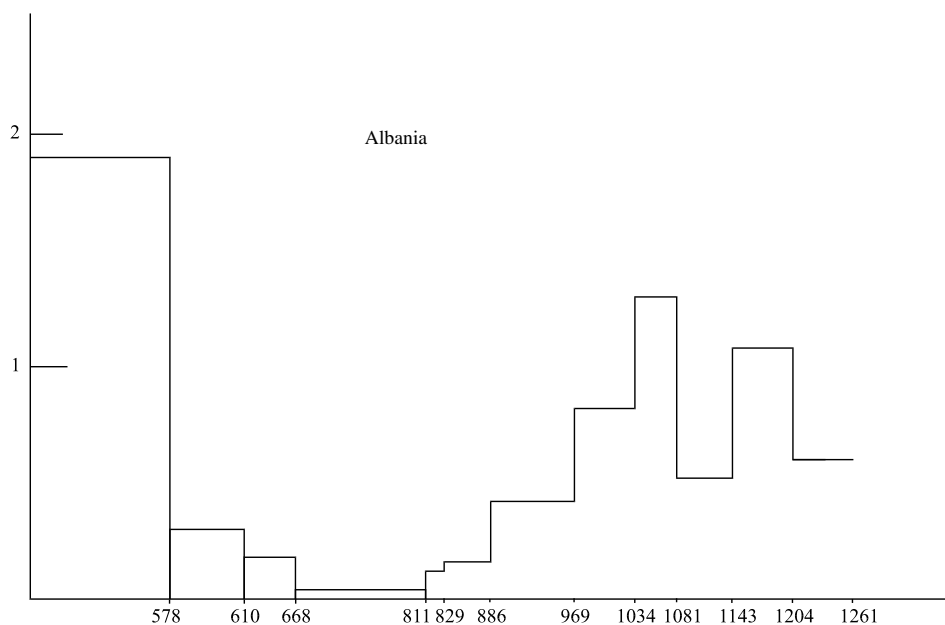
6. Index (or frequency index) of monetary finds on various sites. On these and the following graphs, (Figs. 6.1–6.15) the figures on the vertical axis indicate the annual rate of loss (number of coins found during each period). *Source*: C. Morrisson in *Hommes et richesses dans l'Empire byzantin*, 2 vols. (Paris, 1989–91), 2: 302–3, or original graphs by the author and D. Giovagnoli.



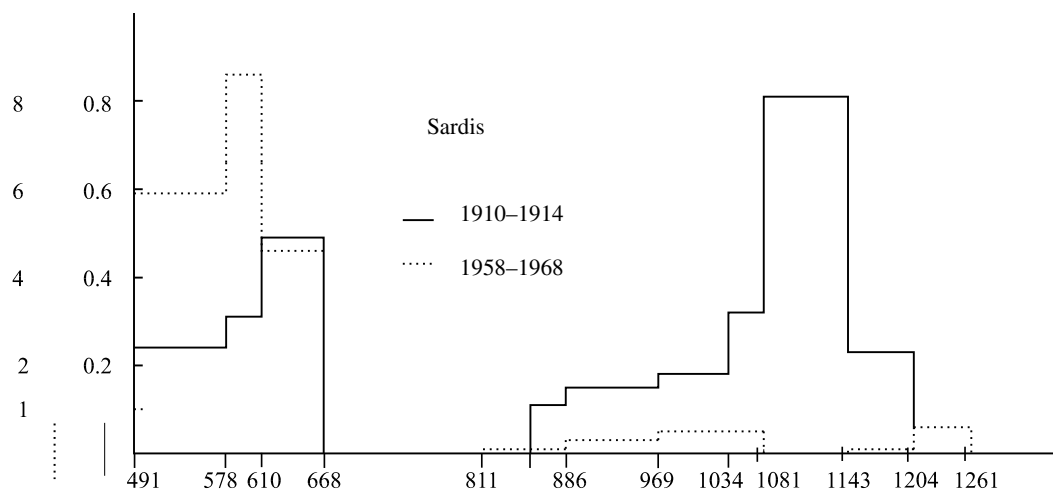
6.1. Monetary finds from Aphrodisias



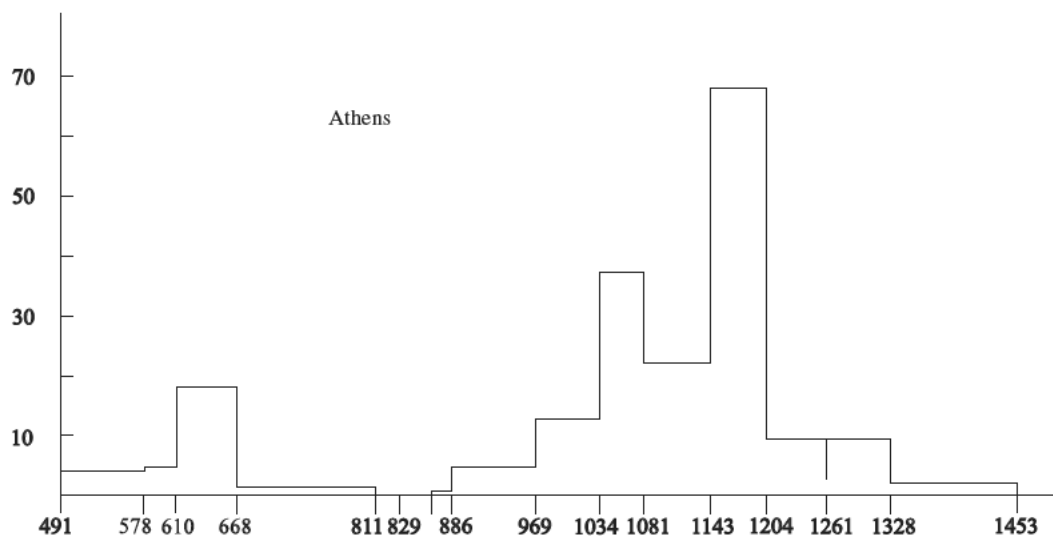
6.2. Monetary finds from Pergamon



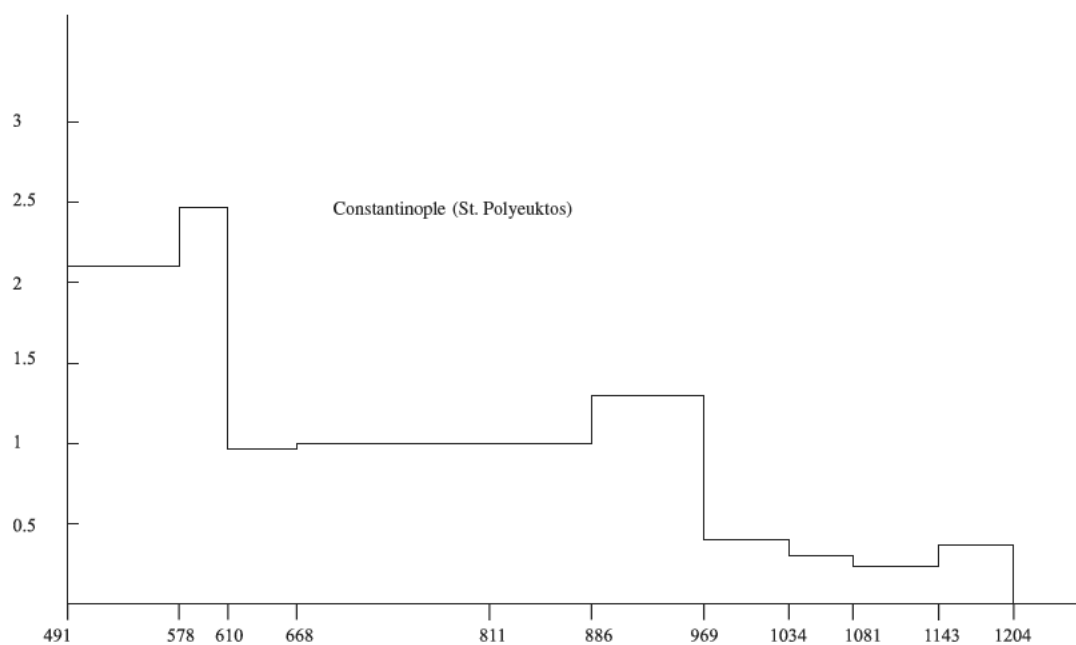
6.3. Monetary finds from Albania (based on data from H. Spahiu, “Monedha bizantine të shkekujve V–XIII, të zbulurara në territorin e Shqipërisë,” *Iliria* 9/10 [1979–80]: 353–421)



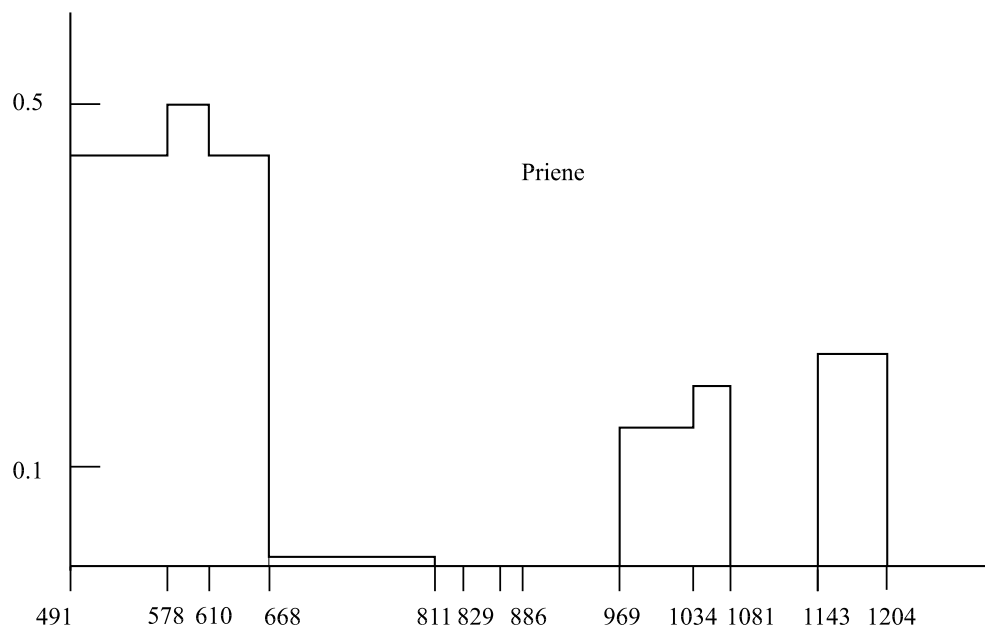
6.4. Monetary finds from Sardis



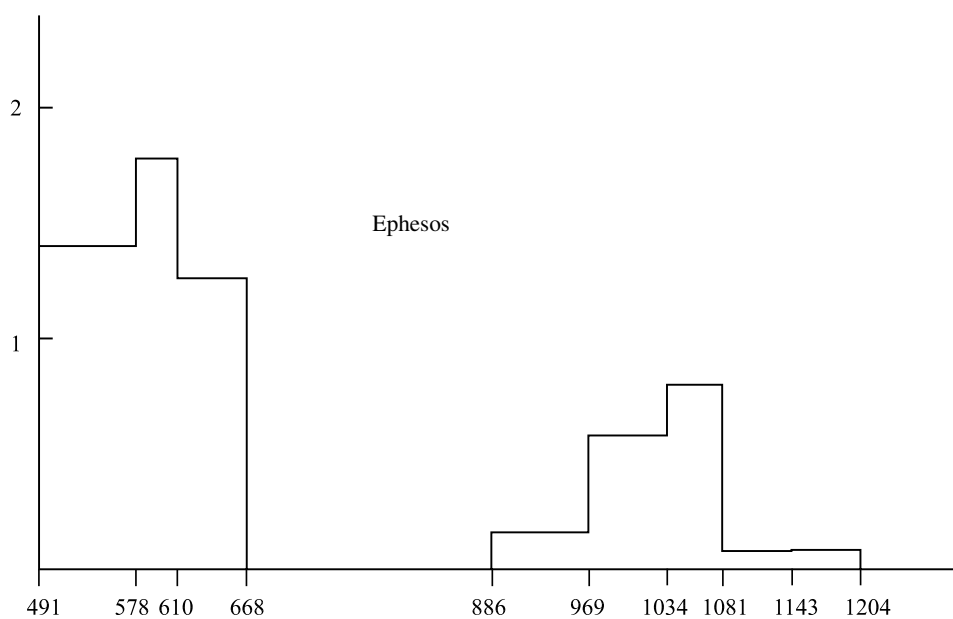
6.5. Monetary finds from Athens



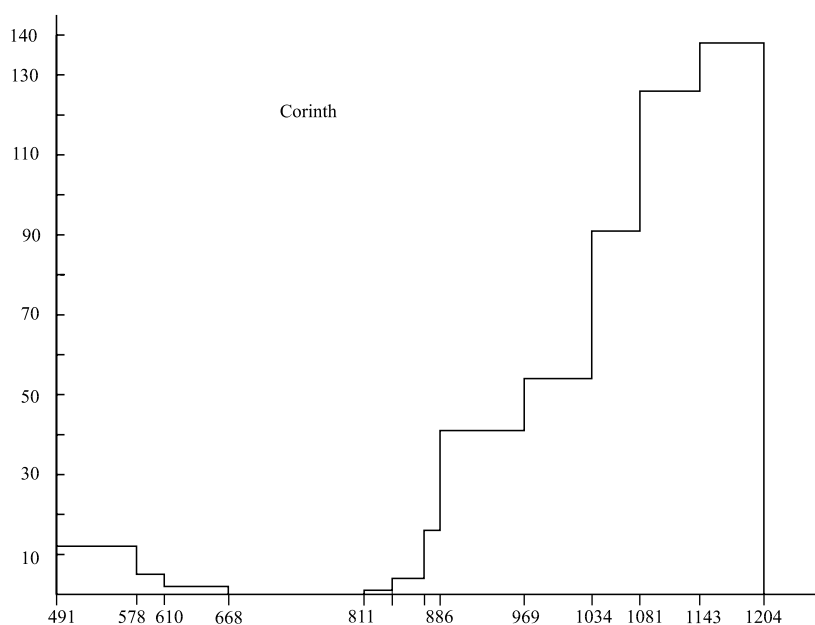
6.6. Monetary finds from Constantinople (St. Polyeuktos)



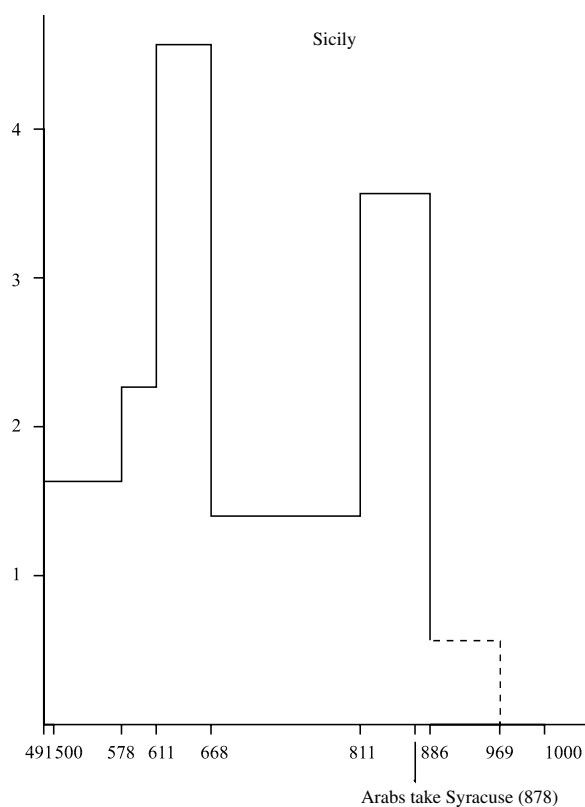
6.7. Monetary finds from Priene



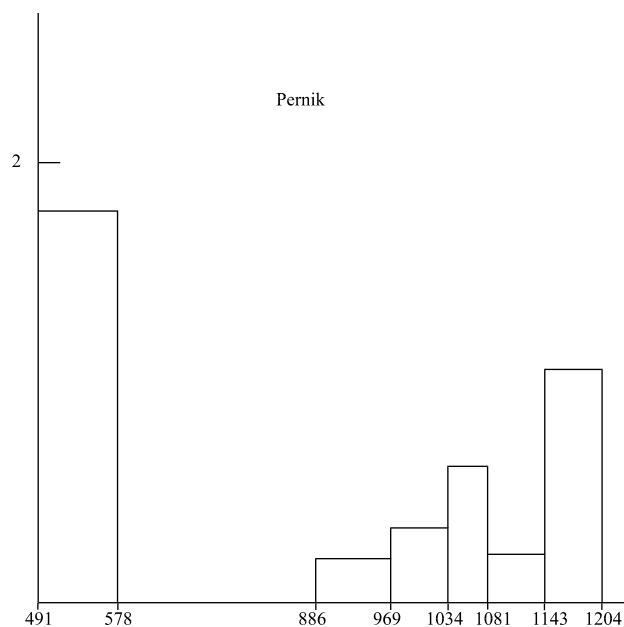
6.8. Monetary finds from Ephesos



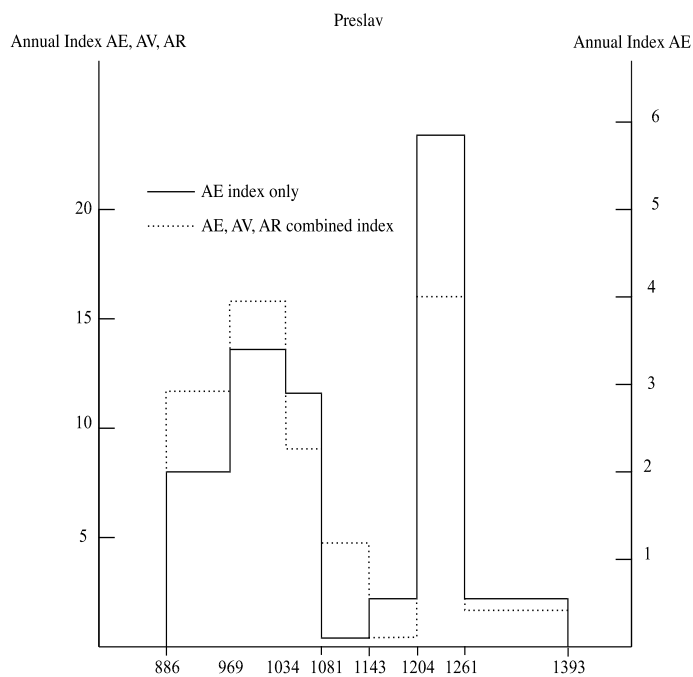
6.9. Monetary finds from Corinth



6.10. Monetary finds from Sicily (*Source: see n. 140, pp. 957–58*)

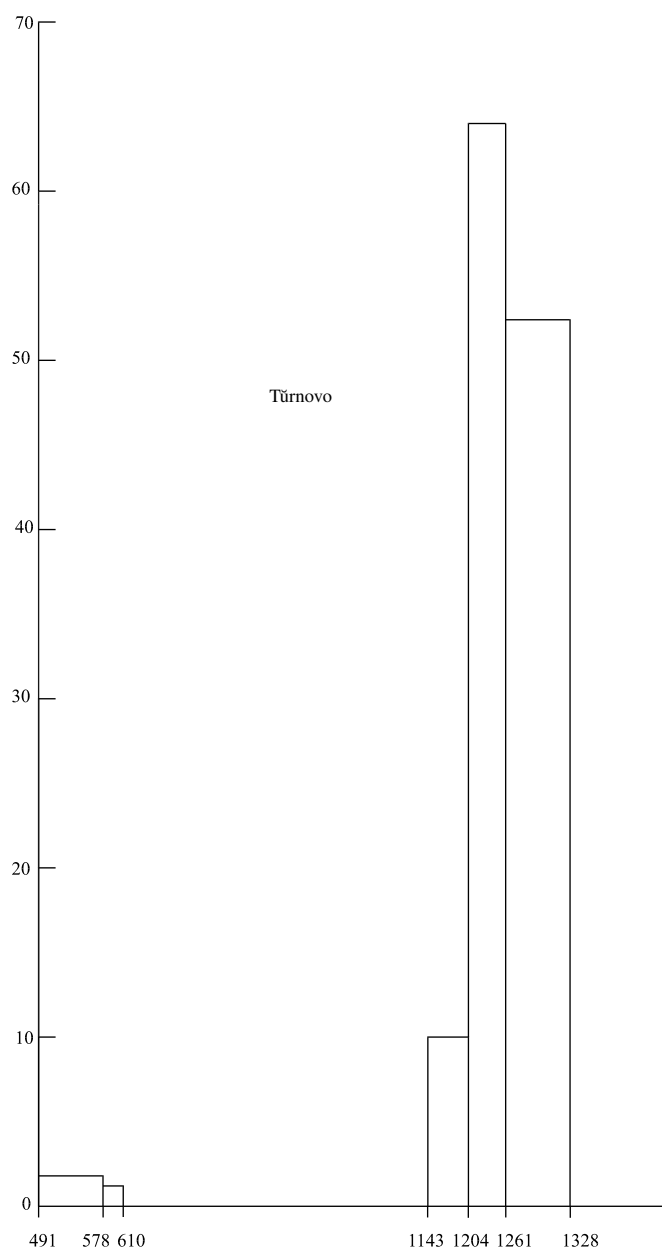


6.11. Monetary finds from Pernik (based on data from I. Iurukova in I. Changova et al., *Pernik*, 2 vols. [Sofia, 1981–83], 1: 218–61; 2: 102–76)

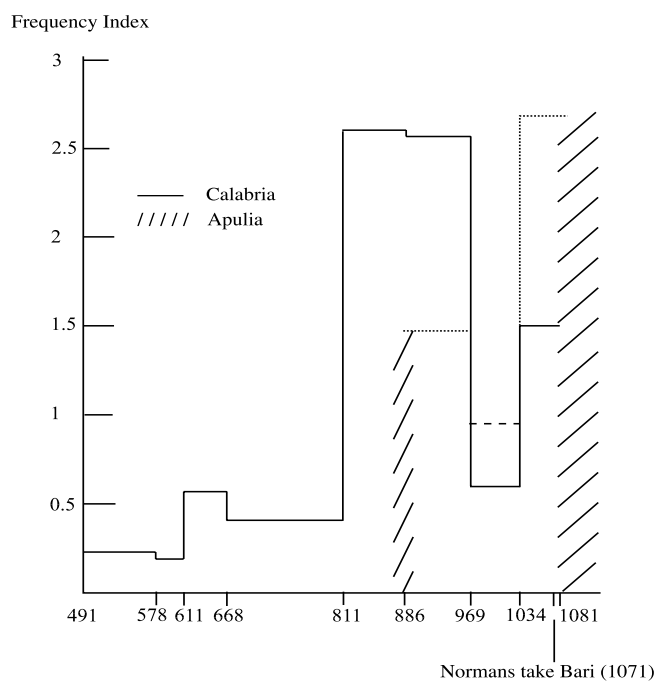


Note: AE = copper; AR = silver; AV = gold.

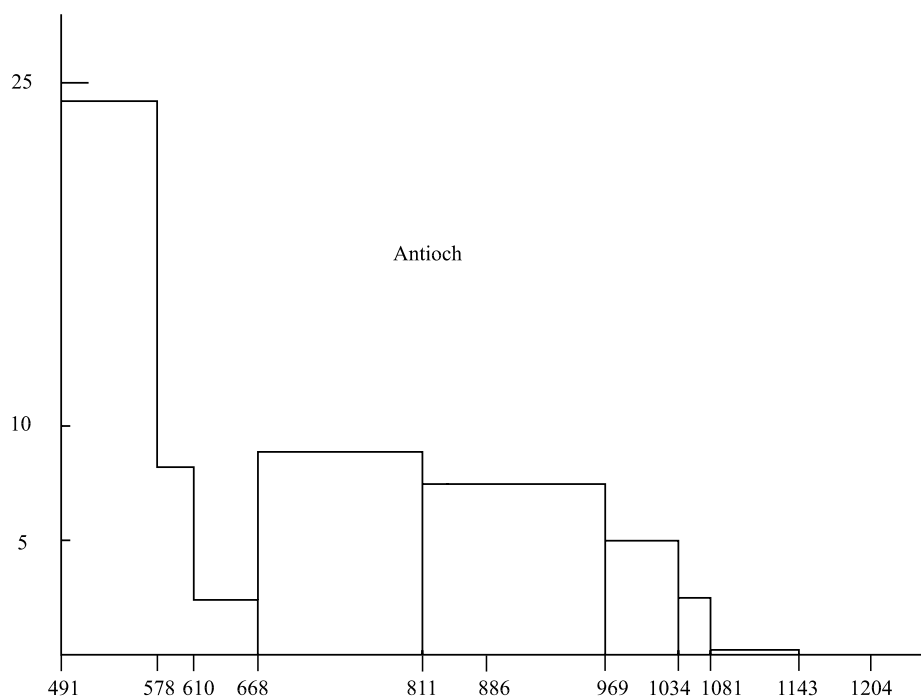
6.12. Monetary finds from Preslav (based on data from I. Jordanov in D. Angelov et al., *Pliska Preslav*, 5 vols. [Sofia 1979–87], 4: 207–14)



6.13. Monetary finds from Turnovo (based on data from K. Dochev, *Moneti i parichno obreschenie v Trnovo XII–XIV* [Veliko Turnovo, 1992])



6.14. Monetary finds from Calabria and Apulia (based on data from G. Guzzetta, “Per la Calabria bizantina: Primo censimento dei dati numismatici,” in *Calabria bizantina: Istituzioni civile e topografia storica* [Reggio, Calabria, 1986], 251–80)



6.15. Monetary finds from Antioch

reigns of Justinian, Maurice, Phokas, and Herakleios, probably ceased when Cartagena fell to the Visigoths in 615.

The age of Herakleios was very troubled, resulting in new temporary military mints that struck a bronze coinage to meet the needs of the troops, in 609–610 at Cyprus and Alexandretta (Alexandria ad Issum),¹³ in 613–14 in Jerusalem, in 615–619 in Isauria, and again in Cyprus in 629. The folles series with immobilized or blundered mint-marks has been convincingly shown to be die-linked to organized issues from 610 to 630 under Persian rule.¹⁴ Whatever the nature of the mint authority, the existence of these more or less regular folles, and of numerous imitations, of the Herakleios type, then of that of Constans II, as well as countermarks with Herakleios' monogram applied in Syria-Palestine during the years around 626–662, all witness to the vitality of money circulation and demand in the region. It is not impossible that these requirements were met, successively or alternatively, first by the Byzantine authorities and then, after the Arab conquest, by the cities or other administrative bodies, which continued to do so until the onset of a bilingual Arab-Byzantine coinage ca. 680 or later, followed by 'Abd al-Malik's reformed coinage in 697.¹⁵

The disappearance of the sacred largesses can be dated to 610; this, together with the devolution of its previous prerogatives to the *sekreta* of different logothetes, brought the production of money under the authority of the *vestiarion*. The reference, in 899, to an ἄρχων τῆς χαρᾶγῆς (master of the mint) found in the *kletorologion* of Philotheos places him among this *offikion*'s staff. The precious metal was probably smelted in the χρυσοχεῖον mint, whose *archon* was dependent on the *sekretion* of the *eidikon*. This official can be identified with certainty with the χρυσοεπητής attested to by Philotheos and earlier, in 842–843, by the Uspenskii *taktikon*. Finally, the *zygostates*, the controller of the weight and quality of the imperial coinage, was dependent on the office of the *sakellion*.¹⁶

These few data apply to the capital, whose production was intended to supply the eastern themes (Asia Minor and the Balkans), which constituted the empire's heart and principal support. Thus Constantinople alone supplied a large area with both bronze and precious metals (see Fig. 1b). This centralization was broken only very partially

¹³ Hahn (*MIB* 2:86–87) rejects the attribution proposed by Philip Grierson and assigns this issue to Alexandria. In the absence of known provenances, it is impossible to decide the matter.

¹⁴ H. Pottier, *Le monnayage en Syrie sous l'occupation perse/Coinage in Persian Syria (610–630)*, with a historical introduction by C. Foss, *Cahiers Ernest-Babelon* 8 (Paris, forthcoming).

¹⁵ C. Morrisson, "La monnaie en Syrie byzantine," in *Archéologie et histoire de la Syrie*, vol. 2, *De la période perse à la période byzantine*, ed. J.-M. Dentzer and W. Orthmann (Saarbruck, 1989), 191–204; eadem, "Le monnayage omeyyade et l'histoire administrative et économique de la Syrie," in *La Syrie de Byzance à l'Islam, VIIe–VIIIe siècles*, ed. P. Canivet and J.-P. Rey-Coquais (Damascus, 1992), 309–18 (commentary by M. Bates, 319–21). This has recently attracted growing interest, and many articles have appeared. For an updated survey, see C. Foss, *Introduction to Coinage in the Near East in the Seventh Century* (Washington, D.C., forthcoming).

¹⁶ N. Oikonomides, *Les listes de préséance byzantines des IXe et Xe siècles* (Paris, 1972), 315–17. In the 12th century the smelting workshop was also the place where coins were struck. Does the following definition in the *Souda* (ed. A. Adler [Leipzig, 1935]), 4:833) refer to these dual functions? Χρυσοεπητήριον: ἐνθα χωνεύουσι καὶ ἔψουσι τὸν χρυσόν.

Table 2
Centralization and Fragmentation of Monetary Production
(Mid-7th–11th Centuries)

Administrative District	Theme	Mints (temporary mint)	Metals Minted
East	Thrace	Constantinople	AV, AR, AE
	Macedonia (est. 824)	(Thessalonike?)	AE (9th, 11th centuries)
	Kherson (est. ca. 832)	Kherson	AE (842–989?)
West		Rome	AV, AR, AE
		Ravenna	AV, AR, AE
		Naples	AV (ca. 660–842)
		Syracuse	AV, AE (642–879)
		(transferred to Reggio)	AV, AE (879–912)

Note: AE = copper; AR = silver; AV = gold.

when the two provincial mints at Kherson and Thessalonike resumed activity with the creation of new themes and the reorganization of former districts under Emperor Theophilos. Kherson began issuing cast bronze coins with the imperial monogram at the end of the reign of Michael III. This series with its particularly easily recognized fabric continued until Basil II.¹⁷ Other bronzes of Michael II and Theophilos, in a fairly easily recognizable style, can very probably be attributed to Thessalonike. Other folles of Basil I and Leo VI, sharing some traits with Sicilian issues, have been convincingly attributed, on the basis of local provenances, to Reggio where the mint of Syracuse was likely transferred after 879.¹⁸ Hendy has suggested also attributing to Thessalonike the folles that bear the name of Constantine X and his successors until 1092, which would have been struck by the provincial mint while Constantinople was striking anonymous folles. However, this thesis has yet to be confirmed by research into the provenances.¹⁹

In the empire's last western possessions, the situation contrasted diametrically with

¹⁷ A. Anokhin, *Monetnoe delo Khersonesa (IV v. do n.e.–XII v. n.e.)* (Kiev, 1977) (The coinage of Khersonesus: 4th Century B.C.–12th Century A.D.) BAR International Series 69 (Oxford, 1980). The chronology by I. V. Sokolova, *Monety i pechati vizantiiskogo Khersonesa* (Leningrad, 1983), is preferable.

¹⁸ Thessalonica mint, see D. M. Metcalf, "The Folles of Michael II and Theophilos before his Reform," *HBN* 21 (1967): 28–29 (nos. 30–36); idem, "The Reformed Folles of Theophilos: Their Styles and Localisation," *ANSMN* 14 (1968): 132 (groups S and Z). Cf. Hendy, *Studies*, 423–25, with the earlier bibliography. See V. Penna, "Numismatic Circulation in Corinth from 976 to 1204," *EHb* 655–58. Reggio mint, see D. Castrizio, "La zecca bizantina di Reggio dopo la conquista araba di Siracusa," *Akten des XII. Internationaler Numismatischer Kongreß* (Berlin, 2000).

¹⁹ Hendy, *Studies*, 428. He now attributes these folles to the *moneta publica* in Constantinople (*DOC* 4.1: 22–28).

Table 3
Monetary Production from 1081 to 1204

Administrative District	Mint (temporary mint)	Metals Minted
Thessalonike-Strymon-Boleron	Thessalonike	AV, El, B, AE (ca. 1092?–ca. 1190?)
Hellas-Peloponnesos	Thebes?	AE (ca. 1092?–ca. 1190?)
Macedonia-Thrace	(Philippopolis?)	AV, B (ca. 1092?)

Note: AE = copper; AV = gold; B = billon; El = electrum.

this relative centralization; indeed, the fragmentation in Italy is explained by the isolation of the various regions following the Lombard conquest. Stylistic analysis shows that several groups of gold coinages existed; attribution is not always easy given the absence of a sufficient number of secure provenances. However, by comparing these gold pieces with bronze coins bearing mint marks and the evidence provided by some hoards, one has been able to identify with increasing confidence the mintings of the main mints, Ravenna and Syracuse, as well as those of Rome and Naples. Their particular metrology, notably the reduction in fineness, and consequently in weight, which affected them from the seventh century on—coinciding, in Sicily, for instance, with the creation of the theme ca. 692–695—could point to the growing regionalization and autonomy of local finances, left to their own resources. In Rome, too, the substitution of the emperor's or the mint's monogram by the papal monogram on the reverse of the silver coinage at the end of the seventh century shows how the pope's control over the operation and financing of the local coinage was growing.²⁰

Very little is known about the way money minting was organized during the age of the Komnenoi, and the outline above is only a hypothesis—albeit a plausible one—constructed by Hendy while comparing numismatic classification with the known administrative structures. It is noteworthy that the imperial mint and χρυσοπλύσια situated in the Great Palace, remained in operation during this period, as the place where precious metals were smelted and purified, and where they were kept, not only in coin form. According to evidence provided by Niketas Choniates, the crowd of rioters who sacked the palace when Andronikos I was deposed in 1185 found wealth amounting to “12 kentenaria of gold, 30 kentenaria of silver, and 200 kentenaria of bronze pieces,”

²⁰ C. Morrisson, “Nouvelles recherches sur l'histoire monétaire byzantine: Evolution comparée de la monnaie d'or à Constantinople et dans les provinces d'Afrique et de Sicile,” in *Monnaie et finances à Byzance: Analyses, techniques* (Aldershot, 1994), art. 10, pp. 274–79 (Sicily), and eadem, “La trouvaille de monnaies d'argent byzantines de Rome (VIIe–VIIIe siècles): Analyses et chronologie,” *ibid.*, art. 12 (Rome).

not including unminted metal.²¹ These were the very workshops in the Great Palace that always attracted “cupidity on account of the gold piled up there” (διὰ τὸν ἐπισεσωρευμένον ἐκεῖθι χρυσόν), and that Nicholas Mesarites describes in rhetorical terms in his account of John Komnenos’ attempted usurpation in 1201. His text does provide some description of the semi-industrial nature of a mass-production process that was effected by “men in blackened clothes, with dusty feet and faces covered in sweat,” who worked “for whole months, even years, night and day to watch over and control the flux and reflux of the gold,” or who, “hidden in their dwellings, deprived of the sun, work unceasingly with hammer and anvil.”²²

The increase in particularism and provincial disputes during the twelfth century gave rise to issues of coins by mints of a more or less ephemeral nature, created *ex nihilo*. During the age of Alexios I, the Gabras family struck folles at Trebizond, some bearing the emperor’s effigy, but most of them anonymous. Niketas Choniates tells us that Theodore Mankaphas “struck a silver nomisma and had his name engraved on it.” Roughly produced trachea bearing the effigy of Theodore, which can be attributed to Philadelphia in the years 1188–90, have been found in Asia Minor, Bulgaria, and northern Greece. The most important issues of coins were those of Cyprus by Isaac Komnenos (1184–91). The wealth of the island, together with the length of the usurpation, explains why these are so varied and abundant; all the denominations are represented, with the exception of the hyperpyron, which may have been excluded on account of some residual respect for the capital’s preeminence.²³

The Latin Empire very probably retained the Great Palace mint, given that, when the Latin embassy came to negotiate a peace settlement, Michael VIII stipulated that the revenues from the *kommerkion* and the mint be divided in half.²⁴ Under the Palaiologoi, minting presumably remained within the domain of the *vestiarion* and its προκαθήμενος.²⁵ It was divided between the two mints, that of Thessalonike and that of the capital, which functioned until 1453, as proven by documents that mention the issues of Constantine XI, which were intended to pay the town’s defenders, and by the presence of these silver coins in a recently discovered hoard.²⁶ The production of bronze coins in Thessalonike was first identified by T. Bertelè in *L’imperatore alato* in 1951, and

²¹ *Nicetae Choniatae Historia*, ed. J. L. van Dieten (Berlin–New York, 1975), 347 (hereafter Choniates): διαρπάζουσιν . . . ὅποσα χρήματα εὔραντο παρὰ τοῖς Χρυσιοπλυσίοις ἔτι ταμιευόμενα (ἦσαν δὲ ἄνευ τῶν μὴ κεκομμένων εἰς νόμισμα ὑλῶν χρυσοῦ κεντηνάρια δώδεκα, ἀργυρίου τριάκοντα καὶ τοῦ ἐκ χαλκοῦ κόμματος διακόσια).

²² Nicholas Mesarites, *Die Palastrevolution des Johannes Komnenos*, ed. A. Heisenberg (Würzburg, 1907), 25–26. C. Morriison, “Moneta, χάραγῆ, zecca: Les ateliers byzantins et le palais impérial,” in *I luoghi della moneta: Le sede delle zecche dall’antichità all’età moderna*, ed. L. Travaini (Milan, 2001).

²³ Hendy, *Studies*, 438–39; S. Bendall and C. Morriison, “Théodore Pierre, Théodore Branas ou Théodore Mankaphas?” *RN*, 6th ser., 36 (1994): 170–81.

²⁴ *Georgii Acropolitae Opera*, ed. A. Heisenberg, 2 vols. (Leipzig, 1903), 1:163: ἐθέλω τοὺς ἐν τῇ Κωνσταντινουπόλει Λατίνοὺς πρὸς τὴν τῶν Ῥωμαίων τελεῖν ἀρχὴν μερίδα μὲν τὴν ἐκ τοῦ κομμερκίου αὐτῶν τὴν ἡμίσειαν καὶ τοῦ χρυσεψητείου αὐτῶν τὴν ἀνάλογον ὡσαύτως εἴσοδον.

²⁵ Hendy, *Studies*, 440–47.

²⁶ S. Bendall, “Un trésor de monnaies de Constantin XI,” *RN*, 6th ser., 33 (1991): 134–42.

S. Bendall has attributed a series of relatively rare hyperpyra and basilika, bearing the names of Michael VIII or Andronikos II, to this mint.²⁷ In Constantinople, production may have been split between two mints: the imperial mint in the Great Palace linked, as under the Komnenoi, with the imperial treasury and the *vestiarion*, striking mainly gold and silver that had been received as taxes; and a mint that struck low-value coins or, possibly, silver brought by the public.²⁸ In the *Libro dei conti* of Badoer, a reference to the Greek banker Constantine Kritoboulos describes him as *dal banco* or *da la zecha*, and business deals concluded with him often involved silver, whether minted or not, rather suggesting that the banker was connected specifically with this “public” workshop, the last avatar of the early Byzantine *moneta publica*.²⁹

The administrative organization of Byzantine mints presents specific features that remained constant during its whole history, and which it is important to stress. Unlike in the West, there were in Byzantium no concessions of minting rights to local authorities (counts, bishops, religious establishments). Supervision of the mint and its possible profits always belonged to the emperor, though he had probably farmed out the mint or part of it by the fourteenth century. Thus the government was certainly capable of controlling, if not the total money supply, at least the output of new types, which made up a vital part of it. However, this did not imply that the emperor or his advisers were capable of conducting a monetary policy in the modern meaning of the term; he was probably content with adapting the quantities struck, their metal content and nominal value, to both his resources in *matières*—as French authors in the eighteenth century designated bullion—and his financial needs. The frequently quoted passage in Psellos’ *Chronographia* is perfectly explicit in this respect, referring to Michael VII’s accomplished wisdom and experience of business, with his “thorough grasp of the whole system of taxation, of revenues and public expenditure, of the incomes paid from the exchequer and the percentage of income paid back to the treasury in the form of taxes. He knew all about the mint, the exact weight of a *stater* [i.e., a *nomisma*], how a touchstone functioned, what proportion of precious metal was included in every gold coin.”³⁰

²⁷ S. Bendall, “Palaeologan Gold Coins from the Mint of Thessalonika,” *Gazette numismatique suisse* 32 (1982): 15–21; idem, “Thessalonican Hyperpyra of Michael VIII?” *ibid.*, 40–41; idem, “A Thessalonican Hyperpyron of Andronicus II and Michael IX?” *NCirc* 89 (1981): 158; idem, “A Palaeologan Silver Coinage for Thessalonika,” *NCirc* 103 (1995): 139. Cf. S. Bendall, *A Private Collection of Palaeologan Coins* (Wolverhampton, 1988), nos. 61, 206–9 (hereafter *PCPC*).

²⁸ Bendall, *PCPC*, 62, links the existence of two very different groups of Manuel II stavrata to the two-mints hypothesis put forward by Hendy (*Studies*, 260 n. 15).

²⁹ *Il libro dei conti di Giacomo Badoer*, ed. U. Dorini and T. Bertelè (Rome, 1956), 152, line 14, *per resto d’ariento*; 179, line 2, *616 perperi grievi*; 179, line 37, and 204, line 25, *livre 10 de stavrati grievi*, etc.; Hendy, “Aspects of Coin Production and Fiscal Administration in the Late Roman and Early Byzantine Period,” in *Economy* (as above, note 7), art. 5, pp. 131–34, and “The Administration of Mints and Treasuries, 4th to 7th Centuries, with an Appendix on the Production of Silver Plate,” art. 6, p. 6.

³⁰ Michael Psellos, *Chronographie*, ed. E. Renauld, 2 vols. (Paris, 1926), 2:173: τὴν τε τῶν στατήρων ἐξεργασίαν καὶ τὴν τῆς στάθμης ἰσορροπίαν καὶ τὰς ῥοπὰς καὶ τὰ λείμματα. τὴν τε χρυστίν ὅπως ἐργάζοιτο καὶ τῶν χρυσῶν χαρακτῆρων ὅποσα ἕκαστος μέτρα τῆς καθαρῆς ὕλης ἔχει. The translation is by E. R. A. Sewter, *Fourteen Byzantine Rulers* (Baltimore, Md., 1979), 368.

The Evolution of the Monetary System

General Features Ever since the creation of the Byzantine monetary system by Constantine in 312, its pivot had been the solidus-nomisma, a real coinage whose nominal value was equal to its intrinsic value, as is proven by the Theodosian Code,³¹ promulgated in 325, which prescribed, respecting the payment of taxes:

If anyone wants to pay in solidi, let him pay for one ounce, seven (6) solidi of fine gold (*auri cocti*), each of five scruples (*scripula*), printed with our effigies, and naturally fourteen (12) for two ounces, thus bringing the entire sum due. The same method (*eadem ratione*, meaning 1 solidus = 4 scruples) must be observed if anyone brings some matter (metal), so that he may seem to have given solidi. Let the gold that is brought be received on scales balanced (*aequa lance*) by equal weights (*libramentis paribus*).³²

The Justinianic Code reiterates these instructions, while abolishing the technical instructions about the weight and the honest way of holding the scales: “That the gold, brought by taxpayers, if anyone wants to pay it in solidi or in matter, be received on correct scales (*aequa lance*) and with equal weights (*libramentis paribus*).”³³ The practice of weighing gold money persisted throughout the period and is still attested by Psellos in his *Synopsis ton nomon*, in which he distinguishes between the different modes of exchange: “by weight, things like gold, silver, copper; by number, small change (*noum-moi leptoi*); and by measure, wine.”³⁴ Indeed, it is only in this context that the crisis provoked by the introduction of a light nomisma, the tetarteron, can be understood.

The just weight was, in fact, one of the conditions for the coinage’s function as legal tender. The inscription on the *exagion* in the Cabinet des Médailles, ΔΙΚΑΙΟC CTAΘ-MOC TΩ TPAXEOC VTIETIVPOV (11th–12th centuries),³⁵ echoes, if echo were needed, a long juridical tradition. In 367 it was made obligatory for sellers and buyers of solidi to accept these coins “modo ut debiti ponderis sint et speciei probae;” in 379 a reminder went out about “the uniform price of all the pure gold solidi” (“obryziacorum omnium solidorum uniforme pretium”), obligations that were reiterated by the Justinianic Code,³⁶ whereas in 445, Novel 16 of Valentinian III also punished with death

³¹ Hendy, *Studies*, 329–30; J.-P. Callu, “Dénombrement et pesée: Le sou théodosien,” *Bulletin de la Société française de numismatique* 34 (1979): 611–12, distinguishes the counted and weighed solidi from the end of the 4th century from the Constantinian solidi, which were simply counted.

³² CTh 12.7.1. This text presents many difficulties and has given rise to an abundant literature. On weights and balances, see C. Entwistle, “Byzantine Weights,” *EHB* 611–14.

³³ CIC, CI 10.73.1.

³⁴ Psellos, *Synopsis tōn nomōn*, PG 122:956.

³⁵ V. Laurent, “Le ‘juste poids’ de l’hyperpyron trachy,” *Congrès international de numismatique, Paris, 1953, Actes* (Paris, 1957), 299–307.

³⁶ CIC, CI 11.11.1 and 3. Hendy, *Studies*, 365, translates “required weight and honest material.” I think that “*species*” refers to the appearance of the piece and, basically, to its type. It was through visual examination of the piece that the money changer had to discern whether the type was falsified, and thus whether the coin was of poor alloy. Cf. J. Andreau, *La vie financière dans le monde romain: Les métiers de manieurs d’argent (IVe siècle av. J.-C.–IIIe siècle ap. J.-C.)* (Rome, 1987), 524.

anyone who dared “refuse or reduce a gold solidus of good weight.” The *Basilics* renewed in their turn the dispositions of CI 11.11.1 and 3, and Novel 52 of Leo VI stated yet again that “every type of coin will conserve both its value and currency, so long as it comes from an authenticated mint, with an unadulterated fineness and an exact weight” (ἀπαραιοίητον τὴν μορφήν ἔχον καὶ τὴν ὕλην ἀκίβδηλον καὶ τὴν ὀλκὴν τέλειον).³⁷

Though weight was an indispensable element, it was not the only one, being obviously indissolubly linked to fineness (the precious metal content). Conveniently enough, this is the meaning of the mark OB which features on Byzantine gold coins between 363 and 720 in Constantinople (and until the mid-8th century in Italy), since it recalls both weight (OB = 72, that is, the number of solidi struck to a pound, and fineness (OB = *obryzum*, or refined gold). The purity, restored by the reforms of Valentinian (367/8) to a level higher than 99%, the maximum that could be achieved by the procedures of the age, retained this extremely high level until the beginning of the reign of Anastasios, after which it fluctuated only slightly. At the turn of the sixth century, gold money had an average fineness of 98% and thus perfectly deserved its qualification as *holokottinos* (ὀλοκόττινος).³⁸ This hybrid term was developed from the expression *aurum coctum* and occurs very frequently in early Byzantine documents, as well as subsisting in current speech until the eleventh century, at which date it began to be replaced by the term *hyperpyron* (ὑπέρπυρον, “cooked, refined by fire”).

Weight and fineness were joined by another element, the authenticity of the stamp, which served to guarantee the other two. Thus the *Book of the Eparch* made it obligatory on the *trapezites* to accept at its theoretical value of 24 obols the miliaresion τὸ ἀκίβδηλον τὸν βασιλικὸν ἔχον χαρακτῆρα καὶ μὴ παρακεκομμένον.³⁹

A few rare texts apply an originally Coptic qualification—ὀλοκόττινο generally associated with gold—to silver coinage, which, as we will see, often retained a high level of purity, although its intrinsic value was not strictly aligned to its nominal value. Alongside this “real”-value gold coinage and a slightly overvalued silver coinage, there was also a bronze coinage of a fiduciary nature that made up the second specific feature of the monetary system. In fact, Byzantium had always known one or more bronze denominations, more precisely, copper (in most cases), billon (copper alloy with a low silver content), and even lead (the nominal value of which was generally higher than its intrinsic value), whereby the monetary ratio gold:copper generally varied between 1:630 and 1:924, as against a metallic ratio on the order of 1:1,200.⁴⁰ This type of

³⁷ *Basilics* 54.18.1 and 3; Novel 52 of Leo VI.

³⁸ *Obryzum*: see “Méthodes d’essai et d’affinage des alliages aurifères dans l’Antiquité et au Moyen Age,” in C. Morrisson et al., *L’or monnayé*, vol. 1, *Purification et altérations de Rome à Byzance*, Cahiers Ernest-Babelon 2 (Paris, 1985) 2, 48, with references. Cf. M. K. Papathanassiou, “Metallurgy and Metalworking Techniques,” *EHB* 124. On the purity of early Byzantine gold, see “*Aureus obryziacus*,” 90–108, and “La monnaie d’or byzantine à Constantinople purification et modes d’altérations (491–1354),” in Morrisson et al., op. cit. 121–24. *Holokottinos*: see R. Bagnall, *Currency and Inflation in Fourth-Century Egypt* (Atlanta, 1985), 15, 16.

³⁹ “If it [the coin] is of good alloy and bears the authentic imperial effigy.” Although κίβδηλεύειν was used most frequently to designate manipulations of the fineness, and ἀκίβδηλον for metal that had not been debased, in this case, the adjective seems to me to apply to χαρακτήρ.

⁴⁰ T. Bertelè and C. Morrisson, *Numismatique byzantine, suivie de deux études inédites sur les monnaies des*

money had disappeared from the West between the sixth and the beginning of the sixteenth centuries, but in Byzantium, on the contrary, it served to endow the whole system with a degree of flexibility. It was undoubtedly this ability to adapt that enabled the system to surmount its many crises and to keep going for centuries.

The Evolution of the Monetary System at Constantinople Metrological characteristics (weight, fineness) are presented in Table 4 as approximate pointers to a situation that was often in flux, the details of which are found in the relevant reference catalogues and studies.⁴¹ The pound weight used (324.72 g) is as estimated by statistical studies⁴² and confirmed by the examination of uncirculated solidi from the Szikáncs hoard (ca. 450). Relations between denominations of different metals are also given on an indicative basis because they may have varied according to the date (e.g., the miliaresion varied between $\frac{1}{12}$ and $\frac{1}{14}$ of the nomisma), although the surviving sources say nothing about this (as was the case with the follis in the 7th century, for which we are reduced to combining values in carats recorded on papyri with its metrological evolution).⁴³ Large sums were expressed in multiples of 100 pounds (kentenarion, sometimes called talanton, from the original value of 100 Attic mnai). In the tenth to eleventh centuries, the talanton was synonymous with the pound.⁴⁴

Table 4 presents only a sort of snapshot, giving an orderly picture of a situation that often fluctuated, with reforms being frequently accompanied by overlapping exchange rates between new and old coinages. The Byzantine monetary system had two main features. It was first and foremost a multidenominational system. Its structure was far more sophisticated than those of contemporary western coinages, which only featured the silver denarius and its half fraction, the obol, at least until the commercial revolution in the thirteenth century and the ensuing monetary evolution. It also demonstrated a great capacity for adapting, since every major monetary crisis was followed

Paléologues (Wetteren, 1978), 112–15. C. Morriison, “La monnaie fiduciaire à Byzance ou ‘vraie monnaie,’ ‘monnaie fiduciaire’ et ‘fausse monnaie’ à Byzance,” *Bulletin de la Société française de numismatique* 34 (1979): 612–16. For the metal composition of small change, see: P. Grierson, “Trace Elements in Byzantine Copper Coins of the 6th and 7th Centuries,” in *Dona numismatica Walter Hävernich zum 23. Januar 1965 dargebracht* (Hamburg, 1965), 29–35; B. C. M. Butler and D. M. Metcalf, “Trace Elements in Byzantine Copper Coins,” *NCirc* 75 (1967): 229–33; T. Padfield, “Analysis of Byzantine Copper Coins by X-Ray Methods” (with a Numismatic Commentary by P. Grierson), in *Methods of Chemical and Metallurgical Investigation of Ancient Coinage*, ed. T. Hall and D. M. Metcalf (London, 1972), 219–36; C. King et al., “Copper-based Alloys of the Fifth Century [395–530],” *RN*, 6th ser., 34 (1992): 54–76. For Byzantine lead coins, see C. Morriison, “Monnaies en plomb byzantines de la fin du VIe et du début du VIIe siècle,” *RIN* 83 (1981): 119–31, and eadem, “Les usages monétaires du plus vil des métaux: Le plomb,” *RIN* 95 (1993): 79–101.

⁴¹ *DOC*, *BNC*, *MIB*, Bertelè, CEB 2, Hendy, *Studies*.

⁴² C. Carcassonne, *BSFN*, 1974, 620: 324.72 g. Relying on earlier French metrologists’ studies from the 16th to the early 20th century, J. Lafaurie would now put it, like Guilhermoz, at 326.34 g (J. Lafaurie, “La livre romaine et ses modifications médiévales,” *Société des Antiquaires de France. Bulletin* (1993): 95–100.

⁴³ C. Morriison, “Monnaie et prix à Byzance du Ve au VIIe siècle,” in *Monnaie* (as above, note 20), art. 3, pp. 247–50.

⁴⁴ See E. Schilbach, *Byzantinische Metrologie* (Munich, 1970), 173 and the 200,000 talanta of Basil II’s hoard which cannot be kentenaria.

Table 4
The Byzantine Monetary System
(Constantinople Mint)

Roman and Byzantine metrological scale:

1 pound = 12 ounces = 72 solidi	= 288 scruples	= 1,728 carats (keratia) (^a 325 g)
1 ounce = 6 solidi	= 24 scruples	= 144 carats (^a 27 g)
1 solidus = 4 scruples	= 24 carats (^a 4.5 g)	
1 scruple (or gramma) =	6 carats (^a 1.12 g)	
	1 carat (or siliqua) (^a 0.18 g)	

Seventh Century, 602–717

GOLD			SILVER	COPPER		
<i>Solidus nomisma</i>	<i>Semissis</i>	<i>Tremissis</i>	<i>Hexagram</i>	<i>Follis</i>	<i>Half follis</i>	<i>Dekanoummion</i> *
(~ 4.50 g 98% Au)	(~ 2.25 g 98% Au)	(~ 1.50 g 98% Au)	(~ 6.72 g 96% Ag)	(~ 14 g to 3g)		
1	2	3	12	288	576	1,152
			1	24	48	96
				1	2	4

*The decline in the weight of the follis brought about the gradual disappearance of the pentanoummion (the last known examples are under Constantine IV, with one single example under Constantine V, *DOC* 10).

Note: Ag = silver; Au = gold. All coins are illustrated actual size.



Gold solidus of Herakleios, *DOC* 2.1: 33a
Gold semissis of Herakleios, *DOC* 2.1: 51a
Gold tremissis of Herakleios, *DOC* 2.1: 53a
Silver hexagram of Herakleios, *DOC* 2.1: 64.16

Copper follis of Herakleios, *DOC* 2.1: 96
Copper half follis of Herakleios, *DOC* 2.1: 72
Copper dekanoummion of Herakleios, *DO* acc. 73.29
[unpublished]

Table 4
(continued)

Eighth–Tenth Centuries

GOLD			SILVER	COPPER	
<i>Solidus/nomisma</i>	<i>(Semissis*)</i>	<i>(Tremissis*)</i>	<i>Miliaresion</i>	<i>Carat/keration</i> (money of account)	<i>Follis</i> ^a
(~ 4.50 g 98% Au)	(~ 2.25 g 98% Au)	(~ 1.50 g 98% Au)	(2.27 g to 3.0 g 98% Ag)		(from ≈ 14 g to 3 g)
1	2	3	12	(24)	288
				(2)	24
				(1)	12

continued

*Very rare after 741. Last known examples under Basil I (867–886).
^aThe dekanoummion disappeared under Constantine V, and the half follis disappeared for good under Theophilos.



Gold nomisma of Theophilos, *DOC* 3.1: 1a.2
Gold semissis of Theophilos, *DOC* 3.1: 6
Silver miliaresion of Theophilos, *DOC* 3.1: 8
Copper follis of Theophilos, *DOC* 3.1: 15c.2

Table 4
(continued).
Tenth–Eleventh Centuries, 963–1092

GOLD		SILVER			COPPER	
<i>Histamenon nomisma</i>	<i>Tetarteron nomisma</i>	<i>Miliaresion</i>	<i>2/3 miliaresion</i>	<i>1/3 miliaresion</i>	<i>Carat/keration</i> (money of account)	<i>Follis</i>
(24 carats-weight) (~ 4.50 g of 98% Au)	(22 carats-weight) (≈ 4.13 g of 98% Au)	(3.0 g to 2.0 g of 98% to 65% Ag)	(2 g to 1.4 g of 98% to 61% Ag)	(0.9 g to 0.6 g)		(≈ 14 g to 3 g)
1		12	16	36	(24)	288
		1	1 1/3	3	(2)	24
			1	2	(1 1/3)	16
				1	(2/3)	8
					(1)	12

*Histamenon nomisma**Tetarteron nomisma**Miliaresion**2/3 Miliaresion**1/3 Miliaresion**Follis*

Gold histamenon nomisma of Basil II, *DOC* 3.2: 6a.7

Gold tetarteron nomisma of Basil II, *DOC* 3.2: 15b.4

Silver miliaresion of Constantine IX, *DOC* 3.2: 7a.1

Silver two-thirds miliaresion of Constantine IX, *DOC* 3.2: 8a.4

Silver one-third miliaresion of Michael VII, *DOC* 3.2: 13a

Copper anonymous follis (A2), *DOC* 3.2: A2.16.1

Table 4
(continued)

The Era of the Hyperpyron, 1092–1204

GOLD	ELECTRUM	BILLON	COPPER			
<i>Hyperpyron</i>	<i>Nomisma</i>	<i>Aspron</i>	<i>Carat/keration</i>	<i>Follis</i>		<i>Half</i>
<i>nomisma</i>	<i>trachy</i>	<i>trachy</i>	(money	(money	<i>Tetarteron</i>	<i>tetarteron</i>
<i>hyperpyron</i>	<i>aspron</i>	(<i>stamenon</i>)	of account)	of account)	(~ 4.0 g)	(~ 2.0 g)
(~ 4.30 g ~ 87% Au)	(~ 4.30 g; 30 to 10% Au)	(~ 4.30 g; 6% to 2% Ag)				
1	3	48	(24)	(288)	864 ?	1,728 ?
	1	16	(8)	(96)	288 ?	576 ?
		4	(2)	(24)	72 ?	144 ?
		2	(1)	(12)	36 ?	72 ?
		1	(½)	(6)	18 ?	36 ?
				(1)	2	4
					1	2

continued



Gold hyperpyron nomisma of Alexios I, *DOC* 4: 20g.5
Electrum trachy aspron nomisma of Alexios I, *DOC* 4: 22.1
Billon aspron trachy (stamenon) of Manuel I, *DOC* 4: 10a.4
Copper tetarteron of Manuel I, *DOC* 4: 18.6
Copper half tetarteron of Manuel I, *DOC* 4: 22.26

Table 4
(continued)

The Era of the Hyperpyron, 1204–1304

GOLD	SILVER	COPPER	
Hyperpyron (~ 4.30 g) (75 to 50% Au)	Aspron trachy Trikephalon <i>Manuelatus</i> (~ 4.30 g ~ 95% Ag)	Stamenon Aspron trachy (~ 4.30 g)	Tetarteron (~ 2.20 g; ¹⁸ / ₁₅ mm)
Concave 1	Concave (12) 1	Concave (288) (24) 1	Flat (576) (48) (2)



Hyperpyron



Aspron trachy / trikephalon



Aspron trachy (stamenon)



Tetarteron

Gold hyperpyron of Michael VIII, *DOC* 5: 21

Silver aspron trachy of Theodore I, *DOC* 4: El 1.1

Copper aspron trachy (stamenon) of John III, Thessalonike, *DOC* 4: Bill. 4.2

Copper tetarteron of John III, Magnesia, *DOC* 4: 56.1

Table 4
(continued)

The Era of the Basilikon, 1304–1367

GOLD	SILVER		BILLON	COPPER	
<i>Hyperpyron</i>	<i>Basilikon (basileo argyryon doukaton)</i>	Half basilikon <i>basileo/(argyridion?)</i>	<i>Tornese/politikon</i>	<i>Stamenon/Trakhion</i>	<i>Assarion (tetarteron)</i>
	(~ 2 g; 22 mm ~ 94%) (then ~ 1.10 g)	(1.3–1.0 g ~ 16 mm)	(~ 0.7 g ~ 17 mm ~ 22.5% Ag)	(~ 4.20 g) ~ 24 mm	(~ 2.1 g) ~ 18–22 mm
Concave	Flat	Flat	Flat	Concave	Flat
1	12	24	96	384	(768)
	1	2	8	32	(64)
		1	4	16	(32)
			1	4	(8)
				1	(2)

continued

Parentheses () indicate estimated values for which there is no documentary evidence. **Bold** type indicates values taken from documentary sources.

Source: C. Morriison, in *Geschichte und Kultur der Palaiologenzeit* (Vienna, 1996).



Gold hyperpyron of John V, *DOC* 5: 1193

Silver basilikon of Andronikos II, *DOC* 5: 533

Silver half basilikon of Andronikos II, *DOC* 5: 550

Billon tornese/politikon of Andronikos II, *DOC* 5: 555

Copper stamenon of Andronikos II, *DOC* 5: 763

Copper assarion of Andronikos III, *DOC* 5: 905

Table 4
(continued)

The Era of the Stavraton, 1367–1453

Hyperpyron (money of account)	SILVER (~ 95% Ag)				COPPER	
	<i>Stavraton</i>	Half	<i>Doukatopoulon</i>	<i>Kokkion/keration</i>	<i>Tornese</i>	<i>Folaro</i>
	<i>stravato</i> (~ 8.8 g)	stavraton (~ 4.40 g)	<i>duchatelo/aspron</i> (~ 1.10 g)	(money of account)	(~ 2.4 g)	(~ 0.8 g)
1	2	4	16	24	192	(576)
	1	2	8	12	96	(288)
		1	4	6	48	(144)
			1	1½	12	(36)
				1	8	(24)
					1	(3 ?)

Parentheses () indicate estimated values for which there is no documentary evidence. **Bold** type indicates values taken from documentary sources.

Source: C. Morrisson, in *Geschichte und Kultur der Palaiologenzeit* (Vienna, 1996).



Stavraton



Half stavraton



Eighth stavraton (aspron)



Tornese



Folaro



Silver stavraton of John V, *DOC* 5: 1233

Silver half stavraton of Manuel II, *DOC* 5: 1325

Silver eighth stavraton (aspron) of Manuel II, *DOC* 5: 1589

Copper tornese of Manuel II, *DOC* 5: 1598

Copper folaro of Manuel II, *DOC* 5: 1603

by a stabilization process that lasted for longer or shorter periods, but always for at least a century: after the inflation of the follis and the disappearance of the hexagram in the seventh century, came the “era of the miliaresion” (8th–10th centuries); after the devaluation of first the gold coinage and then the silver coinage in the eleventh century, came the “era of the hyperpyron” (12th–13th centuries); and finally, after the fall of the gold coinage and the probable hyperinflation of the copper coinage in the fourteenth century, came the “era of the stavraton (silver hyperpyron)” (1367–1453).

The coinage of the seventh century retained the three traditional gold denominations that had existed since the fifth century: the solidus, semissis, and tremissis, which remained very pure (ca. 98%), as we have seen. Starting in the 680s, however, both the gold content and the weight were reduced (to 96% and 4.36 g on average instead of 98% and 4.41 g for the period 491–668). Only half of the weight reduction was due to the presence in the alloy of metals less valuable and less dense than gold. In terms of the fine gold content, the savings effected (4.20 g instead of 4.32 g) were small (2.7%), but not negligible. It is tempting to link these savings to the transformation of the tax system and the imperial finances that marked the decision to abandon the structures of late antiquity.

The sources are more revealing about the financial reasons leading to the resumption of silver minting, with the creation of the hexagram in 616. The name was derived from its weight, 6 grammata (scruples), and it was used “to pay the imperial *rogai* at half the old rate.” As we know, it proved necessary in 621 to resort to the church’s treasury to find enough precious metal to continue with this issue. If its value was indeed $\frac{1}{12}$ of a solidus, the gold:silver ratio would have been 1:18; the nominal value would certainly have come very close to the metallic value. It has been supposed that the near-total absence of silver coinages in the East in the sixth century, as opposed to the abundance of worked silver in the same period, was due to the prices at which mints would buy the metal being far lower than those obtaining on the market. Conversely, the return to abundant issues of coins was ascribed to a more realistic value being assigned to money. However, the quantities struck declined swiftly at the end of Constantine IV’s reign, and the hexagram became a “ceremonial” coinage that was struck to the solidus type, using solidus dies. Several theories have been advanced to explain this decline and disappearance: the difference between the gold:silver ratio in the Muslim and Byzantine worlds, which led to the flight of silver into the caliphate, or the loss of control over regions that supplied the metal, in the Balkans due to the Bulgarian advance and in Asia Minor due to the Arab armies and fleet.⁴⁵ The resumption of a silver coinage on a different basis, with the miliaresion, leads us to seek, at least in part, some internal cause, as Hendy proposed; probably an insufficient difference between the ratio of coined metals and the market ratio, similar to the one that operated in the same way during the sixth century.⁴⁶

⁴⁵ P. Yannopoulos, *L’hexagramme: Un monnayage byzantin en argent du VI^e siècle* (Louvain-la-Neuve, 1978).

⁴⁶ *Chronicon Paschale*, ed. L. Dindorf, 2 vols. (Bonn, 1832), 2:706; Theophanes, *Chronographia*, ed. C. de Boor, 2 vols. (Leipzig, 1883–85), 2:186 (hereafter Theophanes). Hendy, *Studies*, 278–79, 494–95;

A final feature of the seventh century was the constant decline in the weight of the follis, which decreased from an average 12 g under Phokas to 3.60 g ca. 660, while its value in carats slid from $\frac{1}{20}$ to $\frac{1}{40}$ in 621 and perhaps $\frac{1}{96}$ ca. 660. Each particular debasement of the weight and nominal value of the follis was related to political and military vicissitudes.⁴⁷ A first attempt at restoring the coinage came under Herakleios with the return to the norms of around A.D. 600, coinciding with his victory in 629 and the relief that it brought to the empire's finances; it was not followed up, however. Constantine IV, for his part, reverted, with the folles of 527–538 and 550–565, to an earlier weight of $\frac{1}{18}$ of a pound (18 g) and accompanied this measure with a retariffing of earlier specie, with the new half-folles bearing both the mark of their value K (20 nummi) and an M indicating that they were equivalent to the former folles. This measure appears to have been mainly political in nature and to fall within the context of the Justinianic renewal sought by the emperor.⁴⁸ As it was, it did not survive him, and by the end of the century the follis had fallen to its previous low weight. This lower weight is explained by the need to strike a growing number of coins at a time when the supply of copper was not elastic, as is demonstrated by various measures taken at the end of the sixth and in the seventh century, such as melting down statues, occasionally resorting to lead, and Constans II's seizure of metal from the roofs of churches in Rome. The haste with which the pieces were struck witnesses to the inflation; overstrikes, countermarks, blanks scissored by cutting the large pieces of former times into four. The fall in the purchasing power of low-value coinage can be followed with certainty, albeit too imperfectly, in the documents and is marked by the progressive disappearance of the subdivisions of the follis; there were no nummi after Maurice, and the last pentanommia were those of Constantine IV.

Leo III inaugurated the "era of the miliaresion"; this name derives from the new silver money that was struck from 721 on, whose fabric (a large, thin flan), epigraphical type (five lines of inscription in the field), and metrology recall those of the contemporaneous dirham. The miliaresion was intended, if not to copy, at least to compete with the dirham on the political level, by confronting it with a profession of faith by the Christian empire, under the protection of God and the Cross. Although originally ceremonial in nature, the coinage soon exceeded this function; as early as 740 it was being demanded in payment for the *dikeraton* tax that had been created to finance the repair work to the walls of Constantinople.⁴⁹ On this occasion, the coin was valued at $\frac{1}{12}$ nomisma, though it weighed half as much as a hexagram, and its nominal value was certainly greater than the market price for the metal. This explains why the surviving examples are extremely irregular with regard to weight and have often been clipped, a practice denounced in several passages in the *Book of the Eparch*. Attempts were made to prevent this by adding several circles of dots to the impression on the coin. Its fidu-

P. Grierson, "The Role of Silver in the Early Byzantine Economy," in *Ecclesiastical Silver Plate in Sixth-Century Byzantium*, ed. S. A. Boyd and M. M. Mango (Washington, D.C., 1992), 137–46.

⁴⁷ C. Morrisson, "Monnaie et prix à Byzance du Ve au VIIe siècle," in *Monnaie* (as above, note 20), art. 3, pp. 248–50.

⁴⁸ *BNC*, 1:375.

⁴⁹ Theophanes, 1:412.

ciary value certainly varied over the course of the miliaresion's history and explains its longevity (nearly four centuries): improvements to the weight have been noted, during the reign of Theophilos (3 g) and from that of Basil I (2.98 g), as well as variations in its nominal value. The ratio of 1 nomisma = 12 miliaresia = 288 folles, as confirmed by the *Palaia Logarike*, occurs at the end of the eleventh century in the *Glossai nomikai* and other scholia to the *Basilics*; it is implied in certain accounts in the *Book of Ceremonies* but probably rose to 14 by the end of the tenth century.⁵⁰ However imperfectly we are able to follow them, fluctuations of this kind witness to the system's adaptable nature.⁵¹

The miliaresion became the intermediary coinage par excellence in the system by replacing the divisions of the nomisma, which had become very rare since the reign of Constantine V and ceased under Basil I. The same simplifying process affected the low-value copper coinages. The divisions of the follis gradually disappeared during the eighth century, in spite of the episodic output of a half-follis scarcely distinguishable from the whole follis; the mark of value in nummi (M) became meaningless and gave place, under Theophilos, to an inscription running to several lines similar to that on the silver coinage. The result was the simplest possible trimetallic structure, with one denomination per metal. The appearance of one-third and two-third fractions of the miliaresion during the 1030s was undoubtedly a response to the need to facilitate transactions.

At the end of the tenth and in the eleventh century, money underwent a profound transformation, followed by a crisis. The devaluation affected all metals at different dates and according to different modalities. The gold coinage experienced a decline that can be divided into three phases, varying according to the rate and process of the debasement (see Fig. 2 and Table 5; for the processes, see pp. 943–46 and Fig. 3).

A gradual process of devaluation can be observed straightaway, from Constantine VII (914–959) to Michael IV (1034–41). During the period under consideration the proportion of silver in the gold coinage showed a very slight increase (an annual average of 0.04%). This increase was, however, almost continuous and could correspond—though this is an overestimate—to an increase of 0.2% per year in the money supply. It was during this first phase that Nikephoros II Phokas introduced a lightweight nomisma called the tetarteron, which was reduced by one-twelfth (*tetarteron* means “a small quarter,” in relation to the full-weight nomisma, the histamenon). This complex phenomenon has given rise to an abundant literature in which the evidence provided by numismatics is compared with that supplied by historians of the time (Zonaras, Kedrenos).⁵² According to the latter, “receipt of the tax was in heavy nomisma, whereas the smaller one was used for outgoing payments. Furthermore, although, according to law and custom, every nomisma struck from the

⁵⁰ Constantine Porphyrogennetos, *De cerimoniis aulae byzantinae*, ed. J. J. Reiske (Bonn, 1829), 1:799–800.

⁵¹ DOC 3.1:62–68; Hendy, *Studies*, 500–506; N. Svoronos, *Recherches sur le cadastre byzantin et la fiscalité aux XIe et XIIe siècles* (Athens, 1959), 80.

⁵² DOC 3.1:31–33, 37–38; 2:708–10; Hendy, *Studies*, 507–9.

Table 5
The Principal Stages in the Debasement of the Nomisma, 914–1092*

Reign	Dates	Gold (%)	Silver (%)	Copper (%)
Justinian II–Leo VI	695–912	97.3	1.99	0.7
Constantine VII	914–959	94.4	4.8	0.7
Michael IV	1034–41	90.0	7.0	3.0
Constantine IX Monomachos	1041–55	87.0	10.9	2.1
Romanos IV Diogenes	1068–71	70.0	24.8	5.2
Michael VII Doukas	1071–78	58.1	37.1	4.8
Nikephoros III Botaneiates	1078–81	35.8	56.6	7.6
Alexios I Komnenos (prereform)	1081–92	10.6	72.5	16.9

Source: Morrisson et al., *L'or monnayé* (as above, note 38).

*Average rates for the histamenon nomisma.

imperial die was, saving a reduction in its weight, equal in value, the emperor made a law granting a preferential rate to his nomisma.”⁵³ According to H. Ahrweiler, this involved withdrawing previous nomismata and an attempt at stabilizing the nomisma at a lower weight, thus enabling the state to issue 8% more coins using the same quantity of metal.⁵⁴ Presumably, Nikephoros II was seeking in this way to substitute the gradual profit derived from manipulating the level of fineness with the sudden gain achieved simply by reducing the weight. Until ca. 1005, his successors continued, like him, to issue lightweight nomismata, distinguishable from histamena only by weight. Later tetartera, on the contrary, are perfectly recognizable in terms of typology and manufacture (thick flan and smaller diameter), but nothing is known about the conditions in which they circulated and about their market value. Whatever the case, they probably reveal the empire’s efforts at paying at least part of its expenses in lighter coin.

The slow process of debasement was, however, (like the creeping inflation of paper money in our age) relatively more concealed and less painful, which explains why none of the sources from that period allude to it. Not surprisingly, the rate speeded up during a second phase from Constantine IX to Romanos IV—or, more exactly, to the middle of the latter’s reign. Average silver content rose from 10.9% to 24.8%, an increase of 0.4% per year. If we adopt the unrealistic hypothesis that the entire previous output was melted down, this would have corresponded to an increase in the monetary

⁵³ Kedrenos, *Synopsis historion*, ed. I. Bekker, 2 vols. (Bonn, 1838–39), 2:369.

⁵⁴ H. Ahrweiler, “Nouvelle hypothèse sur le tétrartéron d’or et la politique monétaire de Nicéphore Phocas,” *ZRVI* 8 (1963): 1–9.

supply of more than 5% per year. However, it is more likely to have been on the order of 1% (or an increase by one-third in monetary units over thirty years).

In a final and most serious phase from 1071 to 1092, the gold fineness fell rapidly from 35.8% to 10.6% alone under Alexios I, whose “gold” coinage, albeit still containing a tenth of yellow metal, was in appearance no more than a silver coinage. The documents occasionally lay emphasis on the decline in its value,⁵⁵ which was due to the use of an alloy that included silver and copper instead of the native unrefined gold with a high silver content of the two preceding phases.

This method of debasement also explains why the gold content of the coinage fell so catastrophically. It was also responsible for the debasement of the silver coinage, whose fineness remained above 90% until the reign of Constantine X (1059–67) with no significant reduction until the reign of Romanos IV (1068–71) (first issue 90.7%, second issue 71% silver), falling to 45% under Nikephoros III (1078–81). In fact, both the silver and copper added to the nomisma were, on the whole, directly derived from the silver coinages of preceding emperors, and the sequence of these devaluations can be followed issue by issue. Consequently, there is no need to explain this debasement by referring to the silver “famine” in the Muslim East at this period.⁵⁶

Copper coinage also experienced a devaluation, though our only available clue (following the brief return to the heavy standard of the 6th century under Basil II with the anonymous A2 class folles, part of which was struck at 15 or 18 to the pound) is the reduction in the weight of the follis from 24 to the pound (ca. 1028–1067) to 48 to the pound (1068–81), and even the striking of a lead coinage in 1092.

The reform of Alexios I Komnenos put an end to this crisis by restoring a gold coinage of high fineness, the hyperpyron, and by creating a new system destined to endure in its main features for some two centuries. The Komnenian system had the widest range known to Byzantium, after that of the sixth century (from 1 to 2,400 or 12,000 between the solidus and the pentanoummion or the nummus). Its slide toward lower values (the copper tetarteron was worth only a third of the preceding follis) reveals a desire to provide for the circulation of a coin with a weaker purchasing power. For both kinds of precious metal, the choice of fineness, respectively ca. 21 carats for the hyperpyron (instead of the 23 carats of the 9th to 10th centuries or the 22 carats at the beginning of the 11th century) and seven carats for the new white gold coinage (see Fig. 2) was due to the necessity to put back into circulation the existing stock of debased coinages with the least possible loss of metal. This also explains the closely connected disappearance of all silver coin that was more or less pure. The two levels of 21 and 7 carats did in fact correspond to the decision to melt down two sets of coinages, those from the beginning of the eleventh century (ca. 21 carats) and the

⁵⁵ *Actes de Lavra*, ed. P. Lemerle, A. Guillou, N. Svoronos, and D. Papachryssanthou, Archives de l'Athos, 4 vols. (Paris, 1970–82) 1: no. 53, 1. The sale of 3 modioi of vineyard and of 2 modioi of cleared land for χρυσίου διαχαράγματος νομίσματα τεσσαράκοντα καὶ πέντε τραχέα σταυροαγοδημη-
τράτα τῆς τετρημμένης ποιότητος.

⁵⁶ “La monnaie d’or byzantine de Constantinople,” in Morriison et al., *L’or monnayé* (as above, note 38), 137–39.

heavily alloyed issues of the last period. The system remained fairly stable throughout the twelfth century; the hyperpyron did not fall below 19 carats. The slide from the initial rate of 86% (20½ carats) that started with Andronikos I was accentuated under Isaac II and Alexios III but remained relatively limited. The trachy, on the other hand, was first debased during the reign of Manuel I, then under Isaac II, its intrinsic value falling to one-fourth and then to one-sixth of that of the hyperpyron. Finally, the silver-alloyed copper coinage, called *staminum* in Latin sources, saw its silver content fall from 6–7% under John II (1118–43) to 2–3% under Alexios III (1195–1203), and its value in relation to the hyperpyron fell from 1/48 in 1136 to 1/120 in 1190 and 1/184 in 1199 (Fig. 3).

After 1204 the empire of Nicaea was the only Byzantine state to emerge from the dismemberment of the Byzantine lands that struck a complete series of Komnenian denominations. Two transformations may be noted: on the one hand, the evolution of the pale gold coinage, the trachy aspron, into a pure silver coinage⁵⁷ and that of the silver-alloyed copper coinage into a pure copper coinage on the other, and above all the resumption of the debasement of the gold coinage which reduced it from around 17 carats (70%) during the period 1230–60 to ca. 11 carats (45%) within less than a century. Contemporaries were well aware of this process, as is shown by the figures cited in frequently quoted passages from Pachymeres and Pegolotti, which agree closely with the values established by analysis (Fig. 4). This phenomenon is well correlated with the empire's financial difficulties, which played a determining part in both this devaluation and in the diminished quantities struck from 1325 on. The decision purely and simply to stop minting the hyperpyron after 1353 was also linked to the international monetary context of the age. The different ratios between Byzantium and the Muslim world, on the one hand, and western Europe on the other, and the consequent export of metal coin between these zones contributed to the systems' double reversal: the return to gold in Italy (1252–84), and the decline as well as the difficulties involved in minting silver grossi in Venice in the 1320s and later.⁵⁸

In 1304 the introduction of the basilikon, a pure silver coinage modeled on the Venetian ducat or grosso, accompanied or briefly preceded by that of the tourneson/politikon, a billon coinage (with ca. 22% silver), marked the abandonment of Komnenian structures under the influence of western prototypes.⁵⁹ However, the hierarchy and range of denominations remained comparable, insofar as we can tell from estimates that are often unsure about the relative value of the lower denominations. This was

⁵⁷ C. Morrisson, J.-N. Barrandon, and V. Ivanišević, "Late Byzantine Silver and Billon Coinage: A Study of Its Composition," in *Metallurgy in Numismatics*, ed. W. A. Oddy and M. Cowell, vol. 4 (London, 1997).

⁵⁸ C. Morrisson, "Monnaie et finances dans l'Empire byzantin, Xe–XIVe siècle," in *Monnaie* (as above, note 20), art. 4, pp. 311–15, with references. P. Spufford, *Money and Its Use in Medieval Europe* (Cambridge, 1988), 132–86, 267–88; F. C. Lane and R. C. Mueller, *Money and Banking in Medieval Venice* (Baltimore, Md., 1985), 314–18, 326–32, 347.

⁵⁹ P. Grierson, *DOC* 5.1:50, 142. C. Morrisson, "Les noms de monnaies des Paléologues," in *Geschichte und Kultur der Palaiologenzeit*, ed. W. Seibt (Vienna, 1996), 151–62.

also a feature of a system that began in 1367 (see *DOC* 5.1:50–51, 200–203) and was constructed around the stavraton, a heavy silver coin weighing more than 8 g, equivalent to twice the weight of fine metal of the last hyperpyra (4.2 g to 11 carats = 1.92 g gold = 17.3 g silver with a gold:silver ratio of 1:9). The stavraton and its subunits, which were almost as pure as the Venetian grosso, were slightly debased under John VIII, although, paradoxically enough, they recovered their original quality in the last issue of 1453.

Specific Features of Provincial Mints The uniform nature of the gold coinage was symbolized by the inscription CONOB on its reverse, irrespective of which mint was involved. We know that this statement was not merely for form's sake since the Pragmatic Constitution of Justinian (554) for Italy declared that "solidi struck from the Emperors' dies must circulate in all the provinces with no exchange costs" and specified that anyone contravening this rule was to pay his client another solidus for every solidus taxed in this way.⁶⁰ This uniformity dominated until the end of the seventh century, although respect for the capital's metrological norms (weight and fineness) did not prevent specific variations, which may possibly explain why people were suspicious, as indicated by the practices condemned in the document.

In Carthage, for instance, the coinage was systematically dated by regnal or indiction year, reflecting a different way of organizing production. Furthermore, starting with Maurice, solidi became increasingly thick, even globular. Thus the energy required to strike a coin diminished by a factor of 20 over a century, and numismatists can only speculate about the reasons for this particular way of economizing.⁶¹

The composition of the gold coinage remained uniform until the end of the seventh century, with provincial mints applying the same slight reduction in weight and fineness to the solidus as in Constantinople. The first deviation came in 695 at Syracuse; the fineness fell to ca. 80%, where it stabilized until a second and final devaluation between approximately 820 and 886, which turned the nomisma into a coin that was half copper (Fig. 5).⁶² A comparable devaluation, albeit less well known with regard to detail or proceedings, affected the minting of Italian gold during the same period.

Silver coinage was almost nonexistent in the East during the sixth century, though forming a considerable part of the output from western mints at Carthage and in Italy, which kept to the traditions of the Vandals and Ostrogoths. It continued to play a role in Africa until the Arab conquest, although in a system structured very differently from that of Constantinople. Instead of a large and heavy denomination of 1/12 solidus (hexagram of ca. 25 mm and 6.72 g), it involved a series of small coins (12–10 mm or

⁶⁰ CIC, *Nov.* app. VII.20: "sancimus solidos Romanorum principum forma signatos sine permutationis dispendio per omnes provincias ambulare et per eos celebrari contractus."

⁶¹ F. Delamare, P. Montmitonnet, and C. Morisson, "Une approche mécanique de la frappe des monnaies," *RN* 26 (1984): 25–27; C. Morisson et al., "A Mechanical Approach to Coin Striking: Application to the Study of Byzantine Gold Solidi," in *Monnaie* (as above, note 20), art. 13.

⁶² Morisson, "Nouvelles recherches," 275–78.

less, weighing some 0.70 g and 0.30 g, $\frac{1}{3}$ and $\frac{1}{6}$ of a siliqua?) that occupied the intermediary position between, on the one hand, fractions of the solidus and, on the other, the follis, both virtually nonexistent in Africa.⁶³ P. Grierson and W. Hahn estimate the theoretical value of the $\frac{1}{3}$ siliqua at 5 folles, that is, $\frac{1}{120}$ solidus (?).⁶⁴

In Italy, silver was no longer as important as it had been in the seventh century; it was not struck at all in Sicily, where semisses and tremisses were issued in significant quantities until the ninth century. Ravenna still had a few rare coins of $\frac{1}{8}$ siliqua (0.3–0.5 g, worth 3 folles according to Grierson) at the turn of the seventh century, whereas Rome constituted a special case by continuing to strike a “Byzantino-pontifical” coinage (ca. 0.25 g with a fineness that fell from 95% to 30%) until it came within the orbit of the Carolingian world in the 780s.⁶⁵

The peculiarities of the bronze coinage of Alexandria and the western mints can also be noted. Right until the Arab conquest (and beyond with a series of Arab and Byzantine imitations), Alexandria maintained a system that kept to the original denominations of 12, 6, and 3 noummia. The 12-noummia pieces are the only ones that are very common. They constituted the bulk of Egyptian small currency and did not circulate outside the province. Despite the mark of value IB, occasionally the more explicit IBN (*DOC*, Herakleios, no. 190) or 12 noummia, it was probably considered equivalent to a follis of Constantinople in the seventh century, as suggested by the M that occurs between the I and the B on some coins of Herakleios (*MIB* 208–9) and of Constans II (*MIB* 188). At Carthage, the metrology of the coinage was different from that of the capital; the standard was higher, and the half-follis played the dominant role that, in Constantinople, belonged to the follis.⁶⁶ At Kherson, finally, a local bronze coinage was minted between the middle of the ninth and the beginning of the eleventh century. Its metrology was very diverse, since coins varied in weight between 2 and 7 g and in diameter between 10 and 25 mm, without it being possible to establish a hierarchy of denominations. The few analyses that have been carried out have established that the copper alloy had a high lead content (23–60%), pointing to the city’s isolation and difficulty in securing metal.

The absence of any marks of value during the later period means that analogous comparisons cannot be drawn, though the denominations are clearly distinguished by manufacture and metrology. Thus, in the twelfth century, it is possible to compare an eastern or Constantinopolitan zone (including Thrace) where the stamenon (“billon trachy”) dominated with a western zone (Thessalonike and especially Hellas-Peloponnesos)

⁶³ C. Morrisson, “Le rôle du monnayage d’argent dans la circulation africaine à l’époque vandale et Byzantine,” *Bulletin de la Société française de numismatique* 44 (1989): 518–22.

⁶⁴ *DOC* 2:20; *MIB*, 3, 18.

⁶⁵ Morrisson (as above, note 20); A. Rovelli, “Emissione e uso della moneta: Le testimonianze scritte e archeologiche,” in *Roma nell’alto medioevo*, Settimane di Studio del Centro Italiano di Studi sull’alto medioevo 49 (Spoleto, 2000), 821–56.

⁶⁶ *DOC* 2:29–30; C. Morrisson, “Carthage: Production et circulation du bronze à l’époque byzantine d’après les trouvailles et les fouilles,” *BAntFr* (1988): 239–53.

where the tetarteron and even the half-tetarteron played a more important, even exclusive, role.⁶⁷

The fact that the gold coinages from different mints evolved along divergent lines between the seventh and ninth centuries merely reflected the process by which the empire's western provinces were becoming increasingly distanced from its eastern core. As it is, the regional divergences affecting silver, billon, and copper coins, both in the seventh to ninth centuries and until the twelfth century, are evidence of the way that a local currency of a partial or entirely fiduciary nature could adapt to local conditions. Unfortunately, we can only observe this process of adaptation without being able to determine its causes. Various factors, such as the state of the market and of exchanges, price levels and the degree of monetization, as well as the ratio of gold to silver, probably came into play. Thus, in the sixth century, it can be deduced that there was a difference between prices expressed in folles in Africa and Egypt and those in the capital; it is tempting to correlate this difference with the system and metrology specific to each province.

Variations in the Money Supply (Sixth–Fifteenth Centuries)

The question of the money supply and variations to it is obviously basic to all economic research. By evaluating it, we can measure the development and wealth of the state and economy concerned. Apart from periodic discoveries of new mineral resources, relatively limited in time during the period that concerns us, which served to increase the quantities of available metal, positive variations were generally the result of an artificial multiplication of monetary units effected through devaluation. Conversely, any reduction in the money supply, whether due to external payments or to excessive hoarding during troubled periods, not forgetting permanent factors such as wear, attrition, and accidental losses, constituted a constant and much feared threat.

All research must obviously start from an estimate of the monetary production. Although documents about this certainly did exist in the Byzantine Empire, nothing has been preserved to match the monetary ordinances and mint accounts that enable researchers in the West to study in some detail the quantities of coin struck from the end of the thirteenth century on and to put forward coherent aggregates. Thus we are reduced, both for the early Byzantine and the later period, to refer to the specimens that have been preserved. Counting these is a very imperfect method because the number of pieces that survive is very seldom in proportion to the number originally issued, especially when dealing with precious metals that were minted in limited quantities and were hoarded in a very irregular manner. However, during the last three decades, numismatists have refined statistical methods for estimating the original number of dies that were used to strike a given issue. Assuming the random nature of the sample

⁶⁷ Hendy, *Studies*, 435–37; a detailed study by M. Oikonomidou et al., “Ο θησαυρός ‘Κομοτηνής’ / 1979: Συμβολή στην κυκλοφορία των τεταρτηρών του ΙΒ’ αι. μ. Χ.,” *First International Symposium for Thracian Studies, “Byzantine Thrace”: Image and Character*, ed. C. Bakirtzis, vol. 1 (Amsterdam, 1989), 367–428 (= *ByzF* 14.1 [1989], 367–428).

studied, these estimates allow us to compare the relative size of the issues. A further stage can even be reached; by formulating hypotheses about the average number of given pieces that could be struck per die, figures can be suggested for the volume of coin minted, on the basis of such fragile foundations.

Since analyzing the dies for any given output is a lengthy process, which involves comparing all the examples individually and achieves uncertain results, few studies of this kind have been undertaken for Byzantine coinage. So we need to be cautious about an edifice of hypotheses, on which estimates about the quantities struck are based, and to guard against the dangers of reproducing or using them, thus giving them an absolute value that they do not in any way possess. I need only observe that during the early Byzantine period, the few available estimates for issues in the capital—their very abundance discourages any study of the dies—are between ten and five times higher than estimates for provincial mints, which is not unlikely. I should also point out that the variations in the number of dies estimated for the solidi of Constantinople in the seventh century correspond with the historical context when they show an annual production that doubled during the years of war effort (610–632: 1,430,000 solidi?) compared with that of the previous ten years (602–610: 840,000 solidi?) or the following decade (632–641: 750,000 solidi?). Insofar as this estimate for the volume of output is credible, although certainly an overestimate, it is not entirely incompatible with the estimates put forward for the Byzantine budget in the sixth century. It also makes sense when set alongside the figures for issues known from documents for medieval and modern states. For the middle Byzantine period, the iconoclastic corpus offers results that could indicate an annual minting of some 250,000 to 300,000 nomismata (?),⁶⁸ representing a tenth of imperial revenues. The estimate for Constantine VII (260,000) is at first sight low but is based on a far less important corpus (186 examples over forty-five years instead of 1,170 over eighty-six years) and a more delicate use of statistics. As for the surprising difference that has been observed between the estimates for Alexios I (570,000 hyperpyra) and Manuel I (40,000 hyperpyra) to the detriment of the latter, it is far from established, given that it is derived from too limited a base.⁶⁹

Even if one were able to estimate without too much uncertainty the volume of output, the task of piecing together the evolution of the money supplies would not be made much easier, as is demonstrated by the obstacles that crop up in more recent and better-documented periods, such as the eighteenth or nineteenth century in France. In fact, this would require taking account of many other factors, about which not much

⁶⁸ C. Morrisson, "Changes in the Stock of Monetary Bullion in Byzantium," in *Coin Production and Sources of Bullion, 4th–10th Century*, ed. M. Barcelò and M. Blackburn, forthcoming (an up-to-date report on proposed estimates for monetary production during certain reigns). F. Füeg, "Die Solidus-Ausgaben 720–797 in Konstantinopel," *Revue suisse de numismatique* 70 (1991): 35–74; idem, "Vom Umgang mit Zufall und Wahrscheinlichkeit in der numismatischen Forschung," *ibid.*, 76 (1997): 135–60.

⁶⁹ Metcalf, *Coinage in South-Eastern Europe, 820–1396* (London, 1979), 109, acknowledges this: "an estimate based on a proper corpus of Manuel's coins remains a desideratum, before one regards the contrast with Alexius' 8 to 10 million hyperpyra as an established fact."

is known either. Among these are total or annual rates for reminting coins, which would require estimating the average life span of a coinage. This, however, seems to have varied over time and space, when estimates for the gold coinage are based on the chronological span observed in hoards that are considered representative. It changed from about thirty years in the fourth century to sixty to eighty years for the gold money of Constantinople in the seventh to fourteenth centuries, whereas in Carthage, on the other hand, it fell from around eighty years in the sixth century to thirty-eight years in the eighth century.⁷⁰

A further essential factor for estimating the supply is the wastage of metal in circulation as a result of wear on coins, accidental loss, and, finally, hoarding. Wear depends on both the properties of the metallic alloy and the conditions under which money circulates. All things being equal, it is in proportion to the length of circulation. Its rate is modified by any change to the alloy and by any variation in the intensity of the circulation.⁷¹ Assuming that the latter was stable and knowing that the composition of the solidus did not vary during this period, F. Delamare has been able to estimate the annual weight loss for the seventh-century solidi of Constantinople, found in the Rougga hoard, at 0.44 mg, that is, ca. 0.01% of their legal weight. This figure is similar to those that the Monnaie de Paris and the Royal Mint arrived at in the nineteenth century for gold pieces (0.014% for the napoleon in 1824–50, and 0.019% in 1854–88, and 0.034% for the sovereign). However, we must be wary of drawing fallacious analogies, because these modern types are three times more durable than the aureus or the solidus, and weight loss over time is only comparable in cases where the alloy is similar and where the susceptibility to corrosion is known.⁷² What is more, few Byzantine hoards have been studied in this respect, and it is impossible to generalize. Wastage may have played a more important role, but it can only be estimated on a very dubious comparative basis. Statistical surveys were conducted in the United Kingdom during the 1960s prior to the decimalization of the coinage in 1971, which showed annual rates of 3.3%, 0.6%, 1.5%, and 1.8% for the halfpenny, penny, threepenny, and six-penny coins respectively, without any clear hierarchy emerging, although London, the south, and southeastern regions showed higher levels of wastage.⁷³ Even though these

⁷⁰ J.-P. Callu, "Structure des dépôts d'or au IV^e siècle (312–392)," in *Crise et redressement dans les provinces européennes de l'empire (milieu du III^e–milieu du IV^e siècle ap. J.-C.)*, Actes du Colloque de Strasbourg, Déc. 1981, ed. E. Frézouls (Strasbourg, 1983), 157–74. See C. Morriçon (in R. Guéry et al., "Etude numismatique," *Recherches archéologiques franco-tunisiennes à Rougga*, vol. 3, *Le trésor de monnaies d'or byzantines* [Rome, 1982], 66) for a comparison between Carthage and Constantinople in the 7th century. The hypotheses on which G. Depeyrot bases his conclusion about the life span of solidi ("La durée d'utilisation des solidi romains," in *Studia numismatica labacensia: Alexandro Jeločnik oblata*, ed. P. Kos and Z. Demo [Ljubljana, 1988], 213–17), setting it at 30 to 35 years for solidi in the 5th century, are not obvious. Most notably, his calculation of an average rate of wear to be 2 mg per year has been superseded by the theoretical and experimental study by F. Delamare, *Le frai et ses lois: The Wear of Coins*, Cahiers Ernest-Babelon 5 (Paris, 1994), 198–99. See also R. Bland, "The Changing Patterns of Hoards of Precious-Metal Coins in the Late Empire," *An Tard* 5 (1997): 29–55.

⁷¹ Delamare, *Frai*.

⁷² *Ibid.*, 99, 269.

⁷³ T. J. Cole, "Geographical Variation in the Wastage Rate of Modern United Kingdom Coinage," *Statistique et numismatique*, ed. J. Guey and T. Hackens (Strasbourg, 1981), 309–16.

rates applied to coins with the lowest purchasing power, the geologist L. L. Patterson proposed an average rate of 2% for the entire money supply of antiquity and the Middle Ages, a rate that would have resulted in the disappearance of nine-tenths of any specific supply over a century, and appears to be an overestimate. J. H. Munro estimates the wastage rate at between 0.2% and 1% during the later Middle Ages.⁷⁴

Hoarding could effect a serious reduction in the money supply, especially in troubled periods when a greater number of hoards was never recovered than was the case in ordinary times, since “all memory of them had been lost.”⁷⁵ As a general rule, even in a peaceful context, as in Constantinople during the tenth century, hoarding (θησαυρίζειν) was forbidden, as the possible cause of lack of coin (νομίσματος ἔνδεια), which was always feared.⁷⁶ In the same way, the Byzantine government always tried to implement measures that favored the return to circulation of coins that had been buried in hoards.⁷⁷ We would like to know the extent of hoarding, in other words, of the Byzantine population’s involvement in unproductive savings. What proportion of their property was stored in coin form? Such wills as have survived seldom enable any estimate of this or any kind to be made, though some do provide a few figures:⁷⁸ 20–25% of coins and objects in the will of Boilas; 12 pounds of gold in coin in the case of Gregory Pakourianos in 1090, that is, 12% of his capital, if each of his four *proasteia* was also worth the 25 annual pounds of gold that J.-C. Cheynet has estimated for Radolibos; two-thirds of the coins (according to Cheynet, or 40% if one estimates legacies in coin at 119 pounds instead of Cheynet’s 100 pounds) in the patrimony of Kale Pakouriane in 1098. In 1314 the property of the Thessalonike landowner Theodore Karabas—for which I provide a rough estimate on the basis of known price series—consisted basically of town houses (13 \cong 130 hyperpyra), a village house, and vineyards (61 modioi \cong 854 hyperpyra). Karabas also had 300 measures of wine (\cong 30 hyperpyra), 30 tetartia of wheat (\cong 12 hyperpyra), 10 tetartia of millet (\cong 1.5 hyperpyra), an ox and a half a cow (\cong 5 hyperpyra), movable goods in the form of clothes and jewels (\cong 70 hyperpyra, of which \cong 20 hyperpyra in jewels), and the anticipated produce of various pieces of land sown with wheat (\cong 7.5 hyperpyra). The 52 ducats that he left to cover his debts (17.5 hyperpyra) and various money legacies (56 hyperpyra),

⁷⁴ L. L. Patterson, “Silver Stocks and Losses in Ancient and Medieval Times,” *EcHistR*, 2d ser., 3 (1972): 203–35, criticized in Grierson, “The Role of Silver,” 139–40. J. H. Munro, “Monetary Contraction and Industrial Change,” in *Coinage in the Low Countries, 880–1500*, ed. N.J. Mayhew (Oxford, 1979), 99.

⁷⁵ The extent to which a coin issue is represented by its recorded finds today may present a (minimal) measure of its rate of nonrecuperation during the medieval period. D. M. Metcalf, for instance, estimates the survival rate for tens of millions of silver gros struck at Cyprus at one or two in every thousand (D. M. Metcalf and A. G. Pitsillides, “Studies of the Lusignan Coinage,” *Ἐπετηρίς τοῦ Κέντρου Ἐπιστημονικῶν Ἑρευνῶν* 19 (1992): 4–5).

⁷⁶ See Novel 52 of Leo VI and several passages in the *Book of the Eparch*; C. Morrisson, “Manier l’argent à Constantinople au Xe siècle,” in *Eupsychia: Mélanges offerts à Hélène Ahrweiler*, 2 vols. (Paris, 1997), 2:557–65.

⁷⁷ C. Morrisson, “La découverte des trésors à l’époque byzantine théorie et pratique de l’εὐρεσις θησαυροῦ,” in *Monnaie* (as above, note 20), art. 7.

⁷⁸ J.-C. Cheynet, “Fortune et puissance de l’aristocratie (Xe–XIIe s.),” in *Hommes et richesses dans l’Empire byzantin*, 2 vols. (Paris, 1989–91), 2:199–213.

represented some 78 hyperpyra, or rather less than 7% of his total assets (\cong 1,191 hyperpyra).⁷⁹ Finally, in 1384, Maria Deblitzenes dowry,⁸⁰ originally worth 22 pounds of gold in total (1,584 hyperpyra), included 500 hyperpyra (διὰ χαράγματος) or 31%, a percentage that is all the more credible in that all the goods are valued in the text. Leaving aside the fact that money, as a general rule, featured more largely in women's legacies (31–40% in the examples cited here),⁸¹ one can observe that around 25% of the entire capital probably represents the proportion of liquid funds required by land-owners, both to meet their ready cash needs and as a reserve for emergencies. This ratio contrasts, for instance, with the extreme case of Pasino degli Eustachi's legacy, 77.6% of which consisted of coins and only 10% of land. He had been a wealthy Milanese merchant living in Pavia during the fifteenth century, and coins were the tools of his trade.⁸² All these metal reserves were, of course, coveted by the state, which often confiscated them in times of shortage.

However, the state also accumulated reserves of metal whenever it could, and we do have some figures for hoarding by rulers,⁸³ who were either, like Anastasios, praised for their parsimony, or, like Constantine V, blamed, both for their avarice and for the perverse, clearly deflationary results. Arranging these figures into a table (see Table 6) in order to compare them to various estimates of the imperial budget and to deduce averages is a dangerous exercise, for various reasons: the uncertain nature of the data; the arbitrary way in which annual savings are estimated for the duration of the only reigns considered; the empire's constant vicissitudes and the ensuing variations in its finances. I simply note how Anastasios' prudent management, which is often cited as an example, resulted, thanks to an annual surplus of about one-seventh, in stocks representing more than three times the current budget, and that Basil II's exceptional funds amounted to three times as much again.

What, apart from these reserves, which, as we know, consisted partly of coins and partly of ingots, were the sources of coined metal?⁸⁴ New metal appears to have made but a very limited contribution to renewing the money supply. However, by measuring trace elements in the alloy of gold and silver coins and the way they evolve (increase

⁷⁹ See the commentary in *Actes de Chilandar*, ed. M. Živojinović, V. Kravari, and C. Giros, Archives de l'Athos (Paris, 1998), 211–12; cf. A. E. Laiou, "The Agrarian Economy, Thirteenth–Fifteenth Centuries," *EHB* 360–61.

⁸⁰ *Actes de Docheiariou*, ed. N. Oikonomides, Archives de l'Athos (Paris, 1984), 49.

⁸¹ Cf. J.-C. Cheynet, "Aristocratie et héritage," in *La transmission du patrimoine: Byzance et l'aire méditerranéenne*, ed. J. Beaucamp and G. Dagron (Paris, 1998), 59–60.

⁸² C. Cipolla, *Before the Industrial Revolution*, 3d ed. (London, 1993), 35. The coins amounted to 92,500 ducats = 326.5 kg of gold, to which were added jewels worth 2,225 ducats.

⁸³ References and commentary in Hendy, *Studies*, 224–26.

⁸⁴ Naturally, Psellos responds in rhetorical terms to this question (*Accusation de Cérulaire*, ed. J. Bidez, in *Catalogue des manuscrits alchimiques grecs* [Brussels, 1924–]), 6:78: οὐ γὰρ ἐκ μετάλλων μόνον οὐδ' ἀπὸ τῶν τῆς γῆς μυχὼν ὁ τοῦ βασιλέως ἐπιδίδωσι θησαυρός. οὐδὲ φόροι τοῦτον πλήθουσι μόνοι καὶ γεωδαισίας συντέλειαι, καὶ οὐδ' ὁ βοηλάτης αὐτῷ λειτουργεῖ μόνος, ἀλλ' οὐδὲν ἦττον καὶ ὁ χρυσελάτης καὶ ὁ τὸν καττίτερον ἐλαύνων καὶ ὁ τῆκων τὸν μόλιβδον. For mines, see K.-P. Matschke, "Mining," *EHB*, and B. Pitarakis, "Mines anatoliennes exploitées par les Byzantins: Recherches récentes," *RN* 153 (1998): 141–85.

Table 6
Accumulated Reserves and Imperial Budgets, 402–1025

Dates	Reign	Accumulated reserves (in nomismata)	Estimated budget (in nomismata)	% Reserves/ budget	Savings/year (in nomismata)	Savings/ annual budget (percent)
402–457	Theodosios II	7,200,000	5,000,000	144%	130,909	2.6
			6,000,000	120%		2.1
			7,000,000	102%		1.8
491–518	Anastasios	23,040,000	5,000,000	460%	853,333	17
			6,000,000	380%		14
			7,000,000	330%		12
741–775	Constantine V	3,600,000	1,700,000	211%	102,857	6.0
829–856	Theophilos	7,200,000	2,800,000	257%	266,667	9.5
	then Theodora		3,300,000	218%		8.1
976–1025	Basil II	14,400,000	4,000,000	360%	369,230	9.2
			5,000,000	288%		7.3
			6,000,000	240%		6.1

or decrease in a specific element), it is possible in certain cases to detect the appearance of a metal from a different origin, whether derived from new mines or imported. With regard to the gold coinage of the seventh to fifteenth centuries, J. Poirier has estimated the annual rate of renewal in the long term at 1%.⁸⁵ Starting from the same data, A. Guerreau has produced an improved model and estimates this rate at no more than 0.34%.⁸⁶ He proposes a distinction between several phases: between 550 and 900, the reduction in the rate from 450 to 280 parts per million implies a rate of 0.14%, and a greater reduction between 900 and 950 signifies a faster rate of renewal prior to a return to the original rate of 0.14%. The same data for the reign of Alexios I Komnenos and others concerning the empire of Nicaea suggest a partial recourse to new metal, which is hard to quantify.⁸⁷

In the case of silver, A. A. Gordus and D. M. Metcalf have shown variations in the gold traces that could be significant;⁸⁸ pieces with a low gold content were concentrated under the reign of Constantine VI and may have been struck from metal that was originally Arab, to the extent that some of them have been restruck on dirhams. The authors tend to think that, since the political context of the age excluded the payment

⁸⁵ J. Poirier, in Morrisson et al., *L'or monnayé* (as above, note 38), 84, fig. 35.

⁸⁶ A. Guerreau, *Histoire et mesure* 1 (1986): 258–59.

⁸⁷ Morrisson et al., *L'or monnayé* (as above, note 38), 155, 158–60.

⁸⁸ A. A. Gordus and D. M. Metcalf, “The Alloy of the Miliarion,” *HBN* 24/26 (1972) [1977]: 9–36.

of tribute to Byzantium, the arrival of this metal could have been linked to the peace that was instituted in 781 and the reduced customs duties at Hieron and Abydos. Inversely, pieces with higher gold traces could have been struck from metal from the mines of Armenia. As may be seen, the question of the provenance of the metal is one of those that have only recently been addressed by modern methods of analysis, and the answers are still very inadequate. These methods have at least been able to confirm the conclusions outlined by S. Vryonis in 1962, and developed here by K. P. Matschke: the Byzantines did indeed have access to mines and sources of metal.⁸⁹

Insofar as we can judge, however, our period never witnessed an influx, of gold at any rate, comparable to the one that made possible the monetary enrichment of the late empire in the fourth century. Our only assumption is that this contribution of newly extracted or imported metal was in the long term sufficient to compensate for the various forms of wastage (wear and accidental losses or lost hoards) and produced an increase in the money supply only very episodically, as in the case of Nicaea in the thirteenth century.

The Inelastic Metal Supply and Remedies Faced with an inelastic metal supply, the state resorted perforce to a variety of expedients when it needed to restore a balance between inadequate receipts and levels of expenditure, which were generally very resistant to any reduction, although instances of drastic adjustments and savings (such as the abolition of free bread distribution or the reduction by half of all the *rogai* under Herakleios) are not lacking over the years. In fact, there simply was not a sufficiently developed banking system capable of advancing the considerable sums required by the imperial finances when in difficulties. It is only in the fourteenth century that we can see the empire resorting to loans from foreign institutions. The first case was in 1343, when Venice accorded Anna of Savoy and John V a loan at 5% over three years, of 30,000 ducats, paid in hyperpyra by the Venetian merchants of Constantinople, and secured against the crown jewels, rubies, and tiger rubies weighing 31 exagia and 12 carats (equivalent to 609 g) in total. The debt was not repaid, and the jewels remained in Venice's possession until the fall of the empire.⁹⁰

Between the eighth and eleventh centuries, the *rogae*, or "state rents," had supplied a permanent source of liquid assets at reduced cost. In times of crisis, this cost could be reduced still further by cutting back or suppressing payments. However, there is some doubt about the system's flexibility and its ability to provide large sums instantly, nor is there historical evidence for this. On the other hand, the sources are full of instances of resorting to metal reserves, the coins and objects made of precious metal belonging to institutions or individuals: this involved melting down tableware, statues,

⁸⁹ Matschke, "Mining," 115–20.

⁹⁰ T. Bertelè, "I gioielli della corona bizantina dati in pegno alla repubblica veneta nel sec. XIVe Mastino II della Scala," *Studi in onore di Amintore Fanfani*, 6 vols. (Milan, 1962), 2:89–177. For other loans taken out by the Palaiologoi, see *ibid.*, 137–38, n. 64; the last one of these amounted to 9,000 hyperpyra loaned by Genoese merchants to Constantine XI in January 1453, and also mortgaged against a tiger (balas) ruby.

crown jewels or worse, ornaments buried in imperial tombs, implementing loans or confiscations of church treasuries, and, obviously enough, enforced loans or confiscations of private fortunes.⁹¹

Before resorting to such extreme measures, it was possible to develop or extend the use of quasi- or substitute money. On the borderlines between metal money and money of convenience, this lead coinage of minimal or almost no intrinsic value appeared when the current coinage was affected by inflation (late 6th and late 11th centuries) or in isolated regions (Kherson). The example of the leather coinage that Constantine V is supposed to have issued in 743 for his troops under the walls of Constantinople is one of a classic obsidional or siege coinage.⁹² The characteristic and most widespread quasi-money in the economic history of Byzantium is, of course, silk, the constant complement to *rogai* in coin, but which could, when needed, replace the latter wholly or in part, as it did in 1071.

The most current and “softest” solution lay in manipulating the coinage, using the various processes of debasement and devaluation that western authors in the Middle Ages distinguished under the terms *mutatio in materia* or *in pondere*, on the one hand, and *mutatio in appellatione* on the other.⁹³ The first processes were applied especially to precious metal coinages in gold and silver and the second to low-value coins.

A reduction in the weight of a type was detected sooner when it was too marked, as was the case with the tetarteron, and produced inevitable reactions; so this solution was rarely adopted. However, I should note that the average observed weight of the nomisma experienced a tendential reduction, from ca. 4.45 g in the sixth century to 4.35 g in the tenth to eleventh centuries, and to ca. 4.30 g in the twelfth century.⁹⁴ It is not possible to measure the reduction any later than this, because it is clear that the coin weight of specimens was not adjusted *al pezzo*, as it had been previously, albeit less carefully from the twelfth century on, as is shown by the greater incidence of variance (3.6% between 491 and 1081 and 3.7% between 1081 and 1203, but 4.7% in 1222–54, 6.5% in 1258–82, and 8–11% between 1295 and 1328). E. Schilbach’s conclusion was that, during the later period, “in relation with devaluation, they moved away from the old ratio of 1 gold pound = 72 nomismata.”⁹⁵ However, it is difficult to concede that

⁹¹ Hendy, *Studies*, 228–31. On the “roga,” cf. Oikonomides, “The Role of the Byzantine State in the Economy,” *EHB* 1008–11.

⁹² *Gesta episcoporum Neapolitanorum*, chap. 39, cited by W. Brandes, *Die Städte Kleinasiens in 7. und 8. Jahrhundert* (Berlin, 1989), 147: “ne in tantam multitudinem [the crowd of his troops and partisans] famis adcreceret, corii solidos pro aureis nomismatis fecit a negotiatoribus dari et recipi, promittens eos, dum in palatio introiret, omnes colligere et aureis solidos ad corii solidos commutare. Constanter autem obsidentibus urbem, hii qui intra civitatem erant veniam impetrantes, cum gloria ab omnibus receptus est. Ingresso Constantino palatio, promissum quod de solidos fecerat, explevit.”

⁹³ Introduction—and slightly outdated presentation of facts: C. Morriçon, “Alterazioni e svalutazioni,” in *La cultura bizantina, oggetti e messaggio: Moneta ed economia*, ed. A. Guillou et al. (Bari, 1979), 63–119.

⁹⁴ “La monnaie” (as above, note 38), 165–67, 248–50; E. Schilbach, *Byzantinische Metrologie* (Munich, 1970), 166–68.

⁹⁵ Schilbach, *Byzantinische Metrologie*, 173.

they could so easily have abandoned such an essential constant. Although this is not the place to dwell on the weight of the pound, the pivot of Roman and Byzantine metrology, it can be admitted, as several scholars have done, that this weight slid progressively from the estimated 325 g of the fourth to sixth centuries, about which we are nowadays agreed, to 318.7 g and even 304 g at the end of the empire.⁹⁶ With the exception of a few oscillations that are more marked in one way or another, under such and such a reign and for such and such an issue, which were in fact manipulations, this phenomenon amounts rather to a secular slide resulting from the impossibility of maintaining immutable standard weights in the absence of any physical definition of the masses involved.

Debasement was thus the most currently employed means of multiplying monetary units when the metal supply was limited. The proceedings employed were more complex than historians tend to think, and they cast some light on the context of debasement and its consequences. Determining the lead trace element has enabled J.-N. Barrandon to differentiate between “natural alloy” and “artificial alloy,” in other words, between coinages struck in native unrefined gold in which the silver content can vary from a few hundredths to 30% or slightly more, depending on the composition and proportion of the mineral used, and coinages that were “devalued” or, rather, debased by the deliberate addition of silver and copper.⁹⁷

Prior to 1070, the increased proportion of silver in the gold coinage (from 5% to ca. 25%) constituted an undeniable debasement, but it was relatively less harmful than that of the following period, insofar as it implied access to sources of new metal and offered the possibility of substantially increasing the number of types struck, theoretically by a factor of three, without crossing the tolerance threshold, since the yellow color remained unchanged. After 1070, debasement was effected by the addition of silver from the *miliaresia* that were being returned in payment of taxes, and then by the addition of silver and copper, in line with the debasement of these very *miliaresia* with copper, which were then “recycled” into gold coins. This process of “artificial alloy” involved a far lower increase in the number of coins struck than the preceding process and explains, as we have seen, the catastrophic nature of this devaluation which operated, so to speak, within a closed circuit. Though, at the close of the eleventh century, the sources of the alloy metal are clear and even identifiable, issue by issue, this does not apply to the Sicilian *solidi* of the Amorian dynasty. The model only shows that, starting in 830, they were adulterated either with coins composed of 20% silver and 80% copper, or with one part silver for every four parts copper. Since small change of this fineness did not exist in Byzantium or elsewhere at that time, they must have resorted to pure metal (derived from mines, tableware, or coins that had been refined and then returned to the melting pot).

⁹⁶ Entwistle, “Byzantine Weights,” 611.

⁹⁷ “Les méthodes d’analyse des monnaies d’or,” in Morisson et al., *L’or monnayé* (as above, note 38) 33–34, and *passim*. J.-N. Barrandon, “Modélisation de l’altération de la monnaie d’or,” *RN*, 6th ser., 30 (1986): 7–26.

Toward the last days of the empire, the final devaluation of the hyperpyron, at Nicaea and under the Palaiologoi, followed a similar process, with simpler proportions that were not fortuitous. Gold was replaced with a mixture of silver and copper in perceptibly equal proportions (11% silver + 11% copper under Michael VIII; 16–18% silver + 16–18% copper at the beginning of the 14th century). This method of debasement was more efficient because it involved only a slight color change, from yellow to yellowish, despite a considerable reduction in the fineness (from 70% to 45%). It could be thought that this choice stemmed from the experience of the eleventh century; the devaluation of the 1070s and 1080s had been the first in the history of the coinage to reduce the fineness so drastically, if one excludes the marginal cases in Rome and Sicily in the eighth to ninth centuries, which probably had little impact on collective memory. That the lesson had been learned and possibly even exported is shown by the *bizantii saracenati* issued at Acre, Tyre, and Tripoli in the thirteenth century, which adopted the same process.⁹⁸ It explains how, between 1325 and 1353, in spite of the civil war and the financial crisis, the limit of 11 carats was never crossed. Although the color was only a matter of appearance and illusion, it nevertheless enabled the hyperpyron to fare better than the nomismata of comparable fineness issued by Michael VII and his successors, which became *aspra trachea*.

Devaluing the coinage in the proper sense of the term meant to alter its legal value without necessarily modifying its physical characteristics. Depreciations of this kind were frequently implemented and were well known in the West as well as the Muslim world during the Middle Ages and in the modern age. The Roman Empire also devalued, but the sources do not enable us to follow the process in detail in Byzantium. If the theoretical value of the solidus is likely to have remained fixed at $\frac{1}{72}$ to the pound, its ratio to other coins did undergo some changes. Some of these are deliberately recorded, as in the sixth century when Prokopios mentioned the passage of the solidus from 180 to 210 folles; others have been deduced from written sources, as we have seen in the cases of the follis in the seventh century mentioned in papyri⁹⁹ and the miliare-sion of the tenth century, though still others will doubtless remain hidden forever.

One may surmise that, during the late period, particularly under the Palaiologoi, the constant practice of changing the types, which affected the whole currency, was linked to a system of *renovationes*, decrees accompanying a change in value and/or the levy of *seigniorage* (the profit drawn by the sovereign on the manufacture of these new coinages). A famous passage in the account by Agathangelos explains how the traveler, on his return to Constantinople in 1351 with ten “gold nomismata” in his pocket, had changed them into cash (λεπτότερα μέρη τῶν νομισμάτων) in order to carry out his daily purchases more conveniently, a transaction he soon regretted for, as he says, when he visited the merchants the next day, “I found that the money in my hands had fallen and taken such a drop that in a single day the value of my ten nomismata had fallen

⁹⁸ J.-N. Barrandon, M. Bompaire, and C. Morrisson, “The Crusader Besant: Processes of Debasement,” in *Metallurgy in Numismatics* (as above, note 57), 35–51.

⁹⁹ On the follis and the solidus, see Morrisson, “Alterazioni,” 111–19.

to eight.”¹⁰⁰ This passage is generally interpreted as an instance of hyperinflation in the copper coinage, which is not entirely impossible in times as troubled as those, but so sudden and important a depreciation (20% in twenty-four hours) is better explained in terms of a devaluation by the authorities. The Byzantine bronze coinage had suffered devaluations of this kind for a long time, and the troubles to which they could give rise are illustrated in this account by Malalas about the devaluation in 553 and its repeal in the face of popular opposition: “In the month of March, first indiction, there occurred a mutation of the small change. An uprising by the poor ensued and a riot which were reported to the emperor. And the latter ordered that the official value of the small change should conform to the previous custom.”¹⁰¹

It was not always the case that the inelastic metal supply and consecutive depreciation of the coinage led to inflation. In fact, the causes of devaluation in the Middle Ages, particularly in Byzantium, were not always conducive to consequences of this nature. However, this was very much the case when an increase in both public expenditure and the budget deficit was involved and when the state, by creating a coinage with a reduced fineness, made a profit (*seigniorage* in the wider sense of the term, such as employed by economists). This was also the case when certain social groups brought pressure to bear in favor of a “profit inflation” (consisting of devaluing the coinage in which they paid their debts, while their creditors remained liable in strong coin), or again, when there was an imbalance in the balance of payments or in the monetary gold:silver ratio. It was not the case when the demand for coinage increased over the long or medium term, itself induced by an increase in the population and/or a rise in the economy’s overall level of monetization.¹⁰² These variations in the demand for coinage are examined below.

The Demand for and Circulation of Money

Monetization in the Byzantine World

The debate about the Byzantine monetary economy and the contrast between *Geldwirtschaft* and *Naturwirtschaft* in Byzantium goes back to the 1950s when historians began wondering why practically no coins from between the end of the seventh and the beginning of the ninth century have been found in the course of archaeological excavations on large urban sites. I will return to this large gap in numismatic data below.

Unlike A. Kazhdan and P. Charanis,¹⁰³ with their pessimistic assessment of this ab-

¹⁰⁰ *Nicephori Gregorae Byzantina historia*, ed. L. Schopen and I. Bekker, 3 vols. (Bonn, 1829–55), 3:52 (25.27): εὖρον ἐκπετωκὸς τὸ ἐν χερσὶν ἐκείνῳ μοι χάραγμα, καὶ ἐς τοσαύτην κατενεχθὲν ἡμέρα μὴ τὴν ὕφεσιν ὥς τὴν τῶν δέκα μοι νομισμάτων ἐκείνων ποσότητα καταβῆναι μέχρις ὀκτώ.

¹⁰¹ *Ioannis Malalae Chronographia*, ed. L. Dindorf (Bonn, 1831), 486: Μηνὶ μαρτίῳ ἰνδικτιῶνος α' ἐγένετο διαστροφή τοῦ κέρματος: καὶ ἐκ τῶν πτωχῶν στάσεως γενομένης καὶ θορύβου ἀνηνέχθη τῷ αὐτῷ βασιλεῖ: καὶ ἐκέλευσε τὴν κατάστασιν τοῦ κέρματος κρατῆσαι κατὰ τὸ ἀρχαῖον ἔθος.

¹⁰² C. Cipolla, “Currency Depreciation in Medieval Europe,” *EcHistR* 215 (1963): 413–22.

¹⁰³ P. Charanis, “The Significance of Coins as Evidence for the History of Athens and Corinth in the Eighth and Ninth Century,” *Historia* 4 (1955): 163–72 and A. Kazhdan, “Vizantiiskie goroda v VII–XI vv.,” *Sovetskaia Arkheologiia* 21 (1954): 165–73.

sence of bronze coin finds, G. Ostrogorsky defended the contrary concept of a “developed state of the Byzantine monetary economy” in this period¹⁰⁴ by referring to the persistent issue of gold coins. However, the controversy was more about estimating the level of activity in urban circles on the basis of numismatic material than about monetization itself, a concept that has only recently aroused interest.¹⁰⁵

Using a comparative approach, I have proposed combining relatively constant orders of magnitude, as recorded in the best known preindustrial contexts, with a few Byzantine figures deduced from papyri texts or other sources, in order to come up with a viable hypothesis for the sixth and the beginning of the seventh century, on the one hand, and for the twelfth to fourteenth centuries on the other. Subsequently, N. Oikonomides has tried to solve the problem of knowing “to what degree was the middle Byzantine economy monetized?” by analyzing and commenting on forty examples of monetary exchange (payments, wages, gifts or acts of charity, loans, etc.) drawn from saints’ lives of the eighth to eleventh centuries. His answer can be given briefly as “to a high degree” (σε υψηλό βαθμό).¹⁰⁶ Inversely, H. Saradi has gathered about twenty archival documents from the thirteenth to fourteenth centuries that deal with transactions settled partly or wholly in kind, at the request, supposedly, of the benefiting peasants rather than of sellers or landowners/employers.¹⁰⁷ Neither of these studies, however, includes a list of all the recorded transactions that would allow the proportion of barter to monetized exchanges to be determined.

In quantitative terms, it is obvious that the level of monetization in the capital and provincial cities on the main sea or land routes was very different from the levels in the more remote urban sites and countryside. This is a constant feature of preindustrial economies, as emphasized repeatedly by contemporary authors (such as Cantillon in the 18th century) and by present-day historians. J. Durliat and M. Hendy have independently assembled examples from texts illustrating this contrast in Byzantium, and

¹⁰⁴ For the general context of this controversy, see Dagron, “Urban Economy,” 388, and Laiou, “Economic and Noneconomic Exchange,” 681ff. G. Ostrogorsky, “Byzantine Cities in the Early Middle Ages,” *DOP* 13 (1959): 64. For a summary of different points of view, see D. M. Metcalf, “How Extensive Was the Use of Folles during the Years 775–820?” *Byzantion* 37 (1967): 270–310; A. Kazhdan, “Moneta e società,” in Guillou et al., *Moneta* (as above, note 92), 205–22. S. Vryonis, “An Attic Hoard of Byzantine Gold Coins (668–741) from the Thomas Whittemore Collection, and the Numismatic Evidence for the Urban History of Byzantium,” *ZRVI* 8.1 (1964): 291–300, acknowledges “the inconclusive and unsatisfactory nature of the numismatic evidence,” while assembling all the documentary evidence that points to the vitality of a monetary economy based on gold.

¹⁰⁵ Hendy (*Studies*, 289–304) simply mentions (290–91) “the exceptionally low level of liquidity in the 4th c. diocese of Africa” and stresses the lack of liquidity in the provinces.

¹⁰⁶ Morrisson, “Monnaie et finances dans l’Empire byzantin Xe–XIVe siècle,” 294–95; N. Oikonomides, “Σε ποίο βαθμό ήταν εκχρηματισμένη η μεσοβυζαντινή οικονομία,” *Ροδωνιά: Τιμή στον Μ. Ι. Μανουσάκα* (Rethymnon, 1994), 2:363–70. Hendy rejects *a priori* such an approach. Without entirely dismissing hagiographical writings, he excludes any independent use of them on account of their unreliability: “The availability and utilization of coin was subject to such wide extremes of variation . . . as to render any generalisation derived from . . . the totting up of particular hagiographical cases to be virtually meaningless” (*Studies*, 14–15).

¹⁰⁷ H. Saradi, “Evidence of Barter Economy in the Documents of Private Transactions,” *BZ* 88 (1995): 405–18.

M. Metcalf has analyzed evidence from Balkan excavations.¹⁰⁸ Such differences and variations over time and space should, in any case, not serve as a pretext for giving up all attempts at considerations of a more general nature. Of course, as K. Hopkins recalls in his study of tax and commercial exchanges in the Roman Empire, figures should be used with the utmost caution and our method should aim only at establishing a “matrix of possibilities.”¹⁰⁹ Though the matrix proposed in this book (see A. E. Laiou, “The Byzantine Economy: An Overview,” 1146–47) offers only hypotheses, these are interdependent, and any variation in one of these parameters automatically modifies the others.

The level of monetization of a given economy is defined as the commercialized percentage of the GDP, or gross domestic product (Y_m/Y), not to be confused with the level of liquidity, understood as the ratio M/Y (Y being the total GDP, whether monetized or not), with M being understood here as $M1$ in the sense of metallic money alone, Byzantium having known neither paper money, nor $M2$, meaning quasi-coins of various duration, in the absence of true fixed-term deposits of significant size. Although forms of bank accounts certainly had existed in Byzantium at various periods, they were very probably deposits on a current account and may be included within the classic conception of $M1$ defined by liquidity. There is not much difference between levels of monetization and of liquidity, when the velocity of circulation (monetary flow/stock or transactions/ $M1$) is reduced to an annual periodicity, which was certainly the case in certain sectors of the Byzantine economy. In fact, if one allows as we do $Y_m/Y \leq 20\%$ of GDP), and assuming an annual periodicity for transactions, one could well obtain $M/GDP \leq 0.5$. On the other hand, it is more probable that this annual periodicity was valid only for the monetized part of the agricultural GDP ($Y_m \text{ agr} \geq 26\%$ of the GDP) and that the velocity of circulation was four times higher for the monetized part of the non-agricultural GDP ($Y_m \text{ non-agr} \geq 20\%$ of GDP), so the overall average periodicity of monetary transactions was on the order of 1.5^{110} and the liquidity level was only two-thirds of the monetization level ($M/Y = 0.67 Y_m/Y$ or 0.31).

The viscosity of monetary circulation in rural zones was obviously connected to the seasonal cycle of payments linked to grain and grape harvests, as well as to the concentration of monetary transactions and tax payments in September. This is demonstrated by the *typikon* of Pakourianos for the Bachkovo monastery, which prescribes that the *rogai* will not be paid each year in September “the moment when all the returns are made,” but, “in order to avoid the brothers having to travel far to make their purchases, the *roga* will be paid on Easter Sunday, since that is the date set for the fair held at the gates of the monastery, at which everyone can easily find what they need.” Thus the monastery’s cash reserves remained blocked for six months of the year. It was this

¹⁰⁸ Hendy, *Studies*, 284–304, esp. 299–304; J. Durliat, “L’état byzantin et l’économie monétaire,” in Hahn, *Moneta* (as above, note 10), 193–94 and 197–98; Metcalf, *South-Eastern Europe* (as above, note 68).

¹⁰⁹ K. Hopkins, “Taxes and Trade in the Roman Empire (200 B.C.–A.D. 400),” *JRS* 70 (1980): 101–25.

¹¹⁰ $26.25 \times 1 + 20 \times 0.25 = 31.25$. Assuming a total monetary GDP of 46.25, the resulting velocity of circulation would be $1.48 (46.25/31.25)$. On this and what follows, see A. E. Laiou, “The Byzantine Economy: An Overview,” *EBH* 1153–55.

seasonal pattern that constituted the contrast between the countryside and the urban zones with their hinterlands, where exchanges of a less fluctuating nature persisted throughout the year.¹¹¹

The American economist R. W. Goldsmith has proposed an estimate for the level of monetization during the early Roman Empire. He assigns it a maximum of 50% ("it is unlikely to have been as high as one-half"), relying notably on his own estimates for India at the beginning of the twentieth century.¹¹² Other estimates relating to the proportion of revenues destined to autoconsumption in the underdeveloped economies of the twentieth century offer clues that point the same way: from 65% to 60% in the less advanced economies of the Sahel, 50% in the Ivory Coast, and 35% in Senegal ca. 1960, a similar figure to that observed in France ca. 1750. The monetization level of 46% for the whole Byzantine economy at the height of its prosperity proposed here (p. 1154) is consistent with these figures. It certainly covers very diverse situations reflecting, for instance, the 8–40% variation in the percentage of monetary specie in the private fortunes mentioned above or the proportion of expenses in coin for an institution such as the Bachkovo monastery. The annual expenses in coin envisaged by Gregory Pakourianos (the monks *rogai*, i.e., 761 nomismata and distributions of 222 nomismata, i.e., 983 nomismata or 13²/₃ pounds) are estimated at around 20 pounds by P. Lemerle to take account of the unquantifiable wages of the *misthioi*, lighting, the upkeep of buildings, and sundry expenses. Estimates for expenses in kind can be made using prices that we know: using quantities similar to those given for the annual rations envisaged by Attaleiates for his foundation (24 measures of wine, 24 measures of wheat, 3 modioi of dry legumes, 1 nomisma of oil), the food for fifty-one monks, guests, and six unspecified novices, plus food for the poor and travelers, the overall quantities for which are set in chapter 29 of the *typikon*, would have amounted to 79 pounds of gold minimum.¹¹³ Expenses paid in coin and the value of expenses paid in kind were on the order of 1:4, with monetary payments representing 20% of total expenses of foundations whose revenues were mainly agricultural. This approximation does not entirely contradict the maximum value proposed (pp. 1154–55: ca. 35%—26.²⁵/₇₅) within the framework of my hypotheses.

The liquidity ratios noted above have led me to propose values that would have

¹¹¹ Ed. P. Gautier, "Le typikon du sébaste Grégoire Pakourianos," *REB* 42 (1984): 68; P. Lemerle, *Cinq études sur le XI^e siècle byzantin* (Paris, 1977), 143; M. Hendy "The Gornoslav Hoard, the Emperor Frederick I, and the Monastery of Bachkovo," in *Studies in Numismatic Method Presented to Philip Grierson*, ed. C. N. L. Brooke et al. (Cambridge, 1983), 179–91. For an analysis of the seasonal nature of monetary circulation in rural zones, of the monetization of the countryside in the 13th century, and the contrast with the towns in the West, see Spufford, *Money*, 382–86.

¹¹² R. W. Goldsmith, "An Estimate of the Size and Structure of the National Product of the Early Roman Empire," *Review of Income and Wealth* 30.3 (1984): 263–88; C. Morrisson, "Monnaie et finances dans l'Empire byzantin," in *Hommes et richesses* (as above, note 77), 2:294–95.

¹¹³ Lemerle, *Cinq études*, 190–91. Little is known about prices for dried legumes, but the data for Edessa cited in E. Patlagean, *Pauvreté économique et pauvreté sociale à Byzance* (Paris, 1977), 408, show a ratio to wheat ranging from 1:1 (lentils) to 1:1.1 (beans) and 1:3 (chickpeas). The average adopted here is 1:2. The same ratio of 1:1 applies to wheat and *λαχανόσπερμος* in Egypt in the 4th century (Bagnall, *Currency and Inflation*, 64–65).

varied in Byzantium between a maximum 30% in the most monetized regions, during the most monetized periods, and 15% during other periods. Taking into account the overall average velocity of circulation proposed above (1.5), these liquidity ratios correspond well to a monetization level of 45% comparable to that proposed by our matrix. As discussed below, despite the strong spatial and temporal variations in the diffusion of the coinage, money was ubiquitous in the economic life of Byzantium.

What part did public money play in this monetary circulation? The rate of global taxation put forward in this model (21.25%) corresponds to a monetary levy of 17.8%. Taking into account a maximum monetization level of 46.25% in the most prosperous period of Byzantium's economic history and the assumed velocity of circulation, the implication is that taxes represented 57% of all coins in circulation ($17.8/31.2 = 0.57$)¹¹⁴ and 38% of the monetary supply when one estimates that a third at least of the latter was immobilized by hoarding.

Distribution and Hoarding of Byzantine Coins: Monetary Circulation in the Empire

Levels of Circulation and Money Use For a long time now, levels of coinage use have been described in terms of a hierarchy that reflects the scale of the revenues themselves, and even of society. Three levels have been distinguished by P. Spufford for Europe at the turn of the fourteenth century: the gold of the aristocracy, officials, and great merchants; the large silver coins for the highest wages; and the small silver coins, especially the black money (billon), for the minor expenses of everyday life and almsgiving. At that time, the difference in value between the first of these denominations and the last was on the order of 1 to 1,000, a constant that applies nowadays to a hundred-dollar bill and a dime and an order of magnitude that applied more or less to Byzantium during its most highly monetized periods.

The circulation of money in Byzantium followed a pattern similar in most respects to that of the medieval West.¹¹⁵ Thus the distributions made by St. John the Almsgiver during the famine of 613 ranged from one pound (72 solidi) for bishops to 6 nomismata for priests and deacons, 2 nomismata for clerics and chanters, and finally, to the small copper coinage (ἀργύριον τι καὶ ἕτερον κέρμα) for the poor.¹¹⁶ During another

¹¹⁴ This seems very high. If, on the other hand, the tax rate of 23% on gross agricultural production represents only a theoretical *maximum*, and the real tax rate was lower, as I tend to think, and supposing a real tax rate on the order of 15%, then the implications of the model are as follows: public revenues derived from agriculture, $0.15 \times 75 = 11.25$; public revenues in coin derived from agriculture, $0.8 \times 11.25 = 9.2$; public revenues from other sources, in coin $0.20 \times 20 = 4$; total public revenues in coin = 13. This means that the total tax revenues in coin now represent no more than around 42% of the currency in circulation ($13/31.2 = 41.7$) and scarcely 28% of the money stocks ($0.66 \times 41.7 = 27.5$).

¹¹⁵ For the 6th–7th centuries, see Patlagean, *Pauvreté économique*, 342–409. For the West ca. 1400 and its three levels of coin and credit, see Spufford, *Money*, 319–38; and the famous study by J. Meuvret, “Circulation monétaire et utilisation économique de la monnaie dans la France du XVIe et du XVIIe siècle,” in *Etudes d'histoire économique*, Cahiers des Annales 32 (Paris, 1971), 127–37.

¹¹⁶ E. Lappa-Zizicas, “Un épitomè de la Vie de S. Jean l'Aumônier,” *AB* 88.3–4 (1970): 265–78. In

period of high monetization, the twelfth century, Ptochoprodromos compares the *hegoumenos*, with his assets worth 10 pounds in gold, counting his hyperpyra and the poor monk counting his beans, unable to buy himself some caviar, if only for a tetarteron, or to give a “follis” (meaning a stamenon?) in alms.¹¹⁷

Gold was indeed the principal instrument for ordinary and extraordinary imperial payments (*rogai*, tributes or foreign gifts, payments for the palace or for the various grades of provincial administrators), all of which helped put it into circulation.¹¹⁸ However, the result was to distribute gold among the lower ranks of society, not only soldiers but also artisans, peasants, hermits and holy persons, prostitutes, and so on,¹¹⁹ even though low sums were involved, a few pieces or divisional coins, and only on very rare occasions.¹²⁰ In the absence of these divisions of the gold coinage, which disappeared, as we have seen, during the eighth century, the other coins of precious metal (silver, then “electrum,” that artificial alloy of gold and silver) or billon, furnished the necessary change and circulated more commonly than the nomisma. Evidence for this is provided by the miliaresia that were taken along during expeditions to enable the emperor to tip the guards of the Scholae, pages, members of the *hetaireia*, and others¹²¹ and by the use of such pieces to buy a fine fish in the market at Constantinople.¹²² Further evidence is provided by their occasional presence among archaeological finds. Naturally, copper coins are best represented among such accumulations of lost coins, and these are the least hoarded of all.

the 4th century, *argyron* designated (*PRyl* IV, 607, and *POxy* XXIV, 2729) a bronze coin that was originally silverplated (*nummus*). The term was applied next to the nummus and eventually came to mean, generically, early Byzantine small change made of copper: C. Morrisson, “L'économie monétaire byzantine,” *RN* 29 (1987): 248 n. 3.

¹¹⁷ See the satire against the *hegoumenoi* in *Ptochoprodromos: Einführung, kritische Ausgabe, deutsche Übersetzung, Glossar*, ed. H. Eideneier (Cologne, 1991), 4.5.85–96: Αὐτὸς ψηφίζει ὑπέρπυρα καὶ γράφει καὶ στρογγύλα, σὺ δὲ ψηφίζεις φάβατα . . . κ' ἐσὺ ποτὲ οὐκ ἠγόρασες κὰν ταρτεροῦ χαβιάριν . . . αὐτὸς κὰν δέκα κέκτηται λίτρας χρυσοῦς λογάριν . . . σὺ δ' οὐδὲ φύλλιν κέκτησαι, νὰ δώσῃς στὴν ψυχὴν σου.

¹¹⁸ M. Hendy, “Economy and State in Late Rome and Early Byzantium: An Introduction,” in *Economy* (as above, note 7), art. 1; idem, *Studies*, 173–223; G. Dagron and C. Morrisson, “Le *kenténarion* dans les sources byzantines,” *RN*, 6th ser., 17 (1975): 145–62; J.-P. Callu, “Le ‘centenarium’ et l'enrichissement monétaire au Bas-Empire,” *Ktéma* 3 (1978): 301–16. Nikephoros III had given *sekreta* worth several talants (*polytalanta*) to Eudokia Makrembolitissa, and, according to Yahya of Antioch, a monastery with an income of “3 qintars of dinars” (21,600 nomismata) had been given to Romanos III's first wife.

¹¹⁹ Patlagean, *Pauvreté économique*, 350. See also C. Morrisson and J.-C. Cheynet, “Prices and Wages in the Byzantine World,” *EHB* 859–69.

¹²⁰ W. T. Treadgold, *The Byzantine Revival, 780–842* (Stanford, Calif., 1988), 36–38, concludes, “practically every adult Byzantine used coined money occasionally, if only to pay his taxes. . . . Since soldiers were settled all over the empire, even in the outlying areas, paying them in cash put money in wider circulation.”

¹²¹ *De cerimoniis aulae byzantinae*, ed. J. J. Reiske, 2 vols. (Bonn, 1829–30), 1:471, 473. On the distinction between (gold) kenténaria and miliaresia in this text and others, see Dagron and Morrisson, “Kenténarion,” 152–53.

¹²² I. Hausherr, *Vie de Syméon le nouveau théologien*, cited by Oikonomides, “Βαθμό,” 368. Common fish, such as mackerel, cost far less and were sold 11 to the “follis” (tetarteron): see Morrisson and Cheynet, “Prices,” 842.

However, it would be wrong to imagine that these three levels were kept neatly superimposed and separate: both the system for tax collection and private exchanges made it necessary to pass from one to another. Through the mechanism of the *charagma*, evidence for which is found in the *Palaia Logarike* at the end of the eleventh century, the state required tax to be paid in the superior nomisma once it amounted to more than 8 miliaresia (i.e., 1 nomisma for $\frac{2}{3}$ nomisma, 2 nomismata for $1\frac{2}{3}$ nomismata, etc.), with the taxpayer receiving the change (*antistrophe*) in low-value currency. In this form, the process seems to go back to the eighth century,¹²³ though a similar principle was certainly applied to taxes paid in coin during the early Byzantine period. The system played an essential role in promoting the circulation of money and the recycling of coins during the entire period studied here. Although we have no specific information, the implication is that there were fixed limits to the sums that could be discharged using inferior denominations.

Because he had to pay his tax in gold, the taxpayer, having set aside some silver or copper coins, then had to resort to the services of the money changers, just as the shopkeepers, officials, and landowners who owned gold coins did, in order to obtain small change for their minor expenses. Two definitions are topical. The *Glossai nomikai* explain the originally Latin term κολλεκτάριος as ὁ ἀργυρομοιβὸς ἥτοι ὁ κέρμα ἀντι ἀργύρου ἀλλασόμενος τραπεζίτης, ὁ ἀργυροπράτης, while the later definition by Theophylaktos of Ohrid, which consists mainly of explaining the obsolete terms *kollybistai* and *noummoi* rather than the profession, is well known: Κόλλυβισταὶ δὲ εἰσιν οἱ τὰ λεπτὰ νομίσματα πωλοῦντες ἥτοι τοὺς νούμμους: κόλλυβος γὰρ λέγεται τὸ λεπτὸν νόμισμα παρ' Ἑλλήσιν, ὃ Ῥωμαῖοι νούμμον ὀνομάζουσιν (Those who sell small coins or *noummoi* are *kollybistai*; for the [ancient] Greeks give the name *kollybos* to the small coin that the Romans call a *noummos*).¹²⁴ It was indeed a case of moving from everyday coins (νούμμος or κέρμα) to the intermediary currency, silver according to the *Glossai*, and even to gold, always in accordance with an official scale.¹²⁵ In the long term, the constant features of the monetization process outlined here apply more to the initial and final periods (6th–7th, 11th–15th centuries) than to the beginning of the middle Byzantine period (8th–10th centuries) and must be refined, depending on time and place.

¹²³ Svoronos, *Cadastre*; Hendy, "Coinage," 60–61, and *Studies*, 285–87; Morriison, "La Logarikè: Réforme monétaire et réforme fiscale sous Alexis Ier Comnène," in *Monnaie* (as above, note 20), art. 6, pp. 442–43; Oikonomides, "De l'impôt de distribution à l'impôt de quotité, à propos du premier cadastre byzantin," *ZRVI* 26 (1987): 10, and Oikonomides, "Role of the Byzantine State," 1030.

¹²⁴ PG 123:1197B, cited by P. Gautier, "L'édit d'Alexis Ier sur la réforme du clergé," *REB* 31 [1973]: 174.

¹²⁵ The *Logarike* alludes to this scale. See also edict 16 of Valentinian III (445), which fixed the purchase and sale price for the solidus at 7,200–7,000 nummi. Does a memory of such indexes, which would have been posted in inscriptions at the sites where such transactions occurred, feature in the passage of the *Parastaseis* concerning the Strategion, where the "composition of the gold and silver was represented on marble inscriptions"? Ἐν δὲ τῷ μικρῷ Στρατηγίῳ μόλιβδος πολὺς χρηματίζει . . . ἀλλὰ καὶ χρυσοῦ καὶ ἀργυρίου διὰ μαρμαρίνων γραφῶν ποίησις: *Parastaseis Syntomoi chronikai*, ed. T. Preger (Munich, 1898), chap. 24.

The Sources and Their Interpretation There are two major sources for the study of monetary circulation in antiquity and the Middle Ages: documentary evidence, both textual and in the form of inscriptions, and the coins themselves. The former presents problems of interpretation (such as identifying the coins that are mentioned,¹²⁶ the distinction between real money and money of account, etc.); above all, it is very dispersed and not always well preserved. Nevertheless, the documentary evidence allows two major groups to be distinguished: on the one hand, the early Byzantine period, with a few inscriptions from the sixth century such as the edict of Anastasios, the tariffs of Adana and Cagliari, and the corpus of Egyptian papyri including, to a lesser extent, those of Ravenna; on the other, the late period (11th–15th centuries), which includes the acts of Athos, Patmos, and others, as well as the wealth of documentation in Italian archives.¹²⁷

Archaeological evidence as provided by coin finds is more coherent, though it is affected by a degree of bias. There are two reasons for this: the various laws in modern states that serve to encourage or discourage the dissemination of information and have been, or are, implemented in very different ways, and the fortuitous distribution of finds. Numismatists classify these finds as, respectively, hoards (collections of coins that have been deposited intentionally, corresponding to the classical legal definition, “*vetus quaedam depositione pecuniae cuius non extat memoria ut iam dominum non habeat*,”¹²⁸ although here the essential element is the absence of a known owner); isolated finds (meaning coins found by chance in a variety of places); and archaeological finds (meaning all the coins discovered on a single site). These three categories sometimes overlap. Archaeologists can discover isolated finds and hoards on the same site, as was the case at Corinth and Athens; and chance finds that are concentrated in a specific place (such as a river crossing, a church,¹²⁹ or a place of pilgrimage) are intentional, not haphazard, deposits and are thus not related to hoards, which were intended to be recovered, nor to isolated losses on a particular site, archaeological or otherwise.

Hoard (emergency hoards only, not savings hoards) reveal the composition of the coinages in different metals at a given time and place, whereas site finds tend, rather, to provide evidence about fluctuations in the production and supply of the currency, unless a detailed study has been published setting the coins in their stratigraphical context and enabling them to be classified according to levels and periods of circulation. In fact, the average delay between the issue and loss of a coin is such that site

¹²⁶ There is no systematic catalogue of the names of coins in Byzantium, but see *DOC* 3:44–61, 4:55–58, and 5:19–32.

¹²⁷ See Morrisson and Cheynet, “Prices,” *passim*.

¹²⁸ *CIC*, *Dig* 41.1.31.1.

¹²⁹ Not all church finds can be ascribed to voluntary deposits, such as offerings to the Confession of St. Peter in Rome. They were often the result of losses by the faithful and are thus related to site finds, such as at St. Polyeuktos (Saraçhane). Recently, this category of finds has aroused interest: cf. *Trouvailles monétaires d'églises*, ed. O. F. Dubuis and S. Frey-Kupper (Lausanne, 1995).

finds and isolated coins are indeed representative of the monetary circulation of the time, within the scale of a century, which justifies including them in statistical analyses.

This form of documentation, its interpretation, cartography, and methods of statistical evaluation were all developed extensively during the decades after World War II, in line with the publication of new research.¹³⁰ However, with the exception of D. M. Metcalf's work on the Balkans between 820 and 1396,¹³¹ we have no synthesis of this abundant and very dispersed literature. Given the bulk of the documentation, the survey presented here is necessarily more than sketchy. For each of the three great periods under consideration, it attempts to compare the documentary evidence, where it exists, with that of the finds. I am well aware of its imperfections.

The Seventh Century: The "Dark Ages" and the "Break" in Continuity (602–820)

At the turn of the sixth and seventh centuries, money continued to circulate within a space that was integrated in part, but only in part. A hoard found in northern Syria and dated to the beginning of the 590s could still contain bronze coins of Maurice from the main eastern mints (Constantinople, Nikomedeia, Kyzikos, and Antioch) and from Thessalonike, but the African, Italian, and Dalmatian (Salona = Split) mints are represented only by older pieces, witnessing to the mixed coinage of Justinian's reign. Similar examples can be found in the western part of the Aegean: at Athens, in the Dipylon hoard, buried after 583, the coins of Tiberius and Maurice are still derived from Constantinople, Thessalonike, and Nikomedeia, but there, too, the examples from Antioch and Sicily go back to Justin II or Justinian; at Histria, a little hoard dated to ca. 601 contains issues of Justin II and Maurice from Constantinople, Nikomedeia, and Antioch; at Horgești, a further hoard covering the same reigns adds Thessalonike and Antioch to these mints. All of which serves to accentuate the trend toward a monetary circuit that functioned within two large regional groups in the East and the West (themselves possibly divided into more or less autonomous and even closed zones, e.g., Africa, Italy, Egypt) and that was already perceptible in the second half of the reign of Justinian. Was this trend due to the reduced mobility of troops, as compared with the period of the reconquest, or to decreasing interregional exchanges?

These phenomena must have had a joint effect because pottery experts have observed that exchanges between the two parts of the Mediterranean began to decrease, starting in the 550s, and that there was a tendency toward autoconsumption, meaning mainly local provisioning on sites such as Ostia and Carthage.¹³² However, this did not involve a complete caesura as is demonstrated, notably, by the persistent penetration

¹³⁰ See P. Grierson, "The Interpretation of Coin Finds," (1), (2), *NC* (1965), (1966) (= *Later Medieval Numismatics* [London, 1979], arts. 21 and 22); *Coins and the Archaeologist*, ed. J. Casey and R. Reece, (Oxford, 1974), passim—notably the article by J. P. C. Kent, "Interpreting Coin Finds," 184–200—and J. Casey, *Understanding Ancient Coins* (London, 1986), 67.

¹³¹ *Coinage in South-eastern Europe* (London, 1979).

¹³² S. Tortorella, "La ceramica fine da mensa africana dal IV al VII sec.," in *Società romana e impero tardoantico*, ed. A. Giardina (Rome, 1986), 3:211–25; C. Panella, "Gli scambi nel Mediterraneo occidentale," in *Hommes et richesses* (as above, note 78), 1:138–41.

of Byzantine coins into Gaul, parallel to the arrival of African and Oriental pottery there and in Italy, albeit at a modest rate. The overall picture must be adjusted and regional exceptions stressed, such as that of eastern Sicily and its sphere of influence, to which I shall return.

The increasing fragmentation of the Byzantine-Mediterranean complex preceded the seventh century and the Arab conquest. However, the main phenomenon relates to the collapse of the overall level of monetary finds in sites, wherever they are located. This general collapse is summed up spectacularly by the histograms that D. M. Metcalf drew up for the first time in 1960, here corrected or completed by reference to other sites¹³³ (Fig. 6). These histograms were established by summing up the number of bronze coins discovered and arranged in phases, and then by dividing this number by the number of years for each of them, thus producing an annual frequency index. The comparison of sites where the absolute number of pieces found can be very different should, as a general rule, affect this index by a coefficient that takes account of this variable (the total number of coin finds/1,000). On the other hand, the statistics have not been able to take account of the very variable purchasing power of low-value currencies, suggesting that the annual frequency index could somehow be “deflated” by converting the total number of examples into their “bronze value” (each example being given its value in nummi: one follis = 40, a half-follis = 20, etc.) or into the “gold value” (by converting the “bronze value” into solidi according to estimates for the gold:silver ratio during the period under consideration). A conversion of this kind was attempted for the finds from the American excavation at Carthage, and the experience demonstrated that the annual index in bronze value indicates the periods of inflation (the end of the 6th and the mid-7th centuries), but the variations in the gold index run along the same lines as those in the base nondeflated index. The similar conversion practiced on the monetary finds in Dobrudja is more precise insofar as it adopts a chronological breakdown that follows the mutations of the bronze currencies; it enables the importance of the peak observed under Justin II to be relativized but not cancelled.¹³⁴ Thus we can justify retaining this nondeflated index on a provisional basis, concentrating only on its relative evolution.

Everywhere, in the eastern part of the empire, in Asia Minor and in the Balkans, the last issues that are attested in still significant quantities are those of Constans II; a modest revival did not occur before the first half of the ninth century. We are well within the 668–874 limits, very precisely with regard to the drop and a bit beforehand for the recovery, that D. Zakythinos fixed in 1966, on the basis of archaeological finds,

¹³³ D. M. Metcalf, “The Currency of Byzantine Coins in Syrmia and Slavonia,” *HBN* 4 (1960): 429–44, corrected for Antioch by adding finds from the Arab period (Fig. 6.15) and supplemented by those of Aphrodisias, Ephesos, Pergamon, Priene, Constantinople, Tŭrnovo, Preslav, and Pernik, including those from sites in Albania, Calabria, Apulia, and Sicily.

¹³⁴ C. Morisson, “Coin Finds in Vandal and Byzantine Carthage: A Provisional Assessment,” in *The Circus and a Byzantine Cemetery at Carthage*, ed. J. H. Humphrey (Ann Arbor, 1988), 1:423–35. G. Poenaru-Bordea, “Problèmes historiques de la Dobroudja (VIe–VIIe siècles) . . .,” in Guey and Hackens, *Statistique et numismatique* (as above, note 73), 365–77.

for the large gap (“la grande brèche”) of the seventh to ninth centuries. The evidence of site finds is indisputable; since isolated lost coins are involved, the lacunae cannot be explained, as has sometimes been attempted, by Theophilos’ monetary reform, which would have withdrawn the earlier bronze coins, or by a *damnatio memoriae* of iconoclastic coins. Similarly, on the sites, the relatively important number of seventh-century bronze coins is not directly linked to the insecurity of the age, as it is in the case of hoards. Of course, the material gathered never does relate to the whole of a site, and we do not always have continuous data for the merchants’ zone that is most likely to provide coins.¹³⁵ Nevertheless it may be supposed that, though a more exhaustive collection would improve this general picture in important ways, it would not fundamentally alter it.

A few examples will sum up the well-known and frequently commented on monetary gap that reveals the process of decline and impoverishment whereby “towns” were reduced to the role of places of refuge: at Ankyra, nothing between Constans II and a single follis of Leo IV; at Aphrodisias (Fig. 6.1), no coins between Constans II and Theophilos; at Pergamon, none between 715 and 820 (Fig. 6.2); at Kenchreai, nothing between Constans II and Leo VI; and in the Albanian finds (Fig. 6.3), no bronze pieces between 668 and 802.¹³⁶ The rapid and accentuated decline in monetary circulation was accompanied by a retraction in the range of its diffusion, a geographical retraction that shrank faster than the empire’s frontiers. Thus the relative ubiquity of the coinage until the end of the sixth or the beginning of the seventh century in the Balkans, and until the mid-seventh century in Asia Minor—though several finds from the reign of Constans II at Sardis (Fig. 6.4) and Athens (Fig. 6.5), for instance, must be related to military expenditure and the cantonment of troops¹³⁷—contrasts with the very small number of places that have disclosed coins issued between 668 and 820.

The situation appears to have been less serious in Constantinople, going by the unfortunately very limited evidence provided by excavations in the Hippodrome, which have not been adequately published, and those at Saraçhane. At St. Polyeuktos (Fig. 6.6), in fact, Hendy stresses both the absence of any diminution of or interruption in the monetary series, so strong a feature of provincial sites, and the “extraordinary representation” of issues of the eighth and ninth centuries. This numismatic contrast between the capital and the provinces is only to be expected; Metcalf had drawn attention to it as early as 1967. It corresponds with the impression provided by the texts, which has often been stressed, as much, for instance, by W. Brandes with regard to Constantine V and the period as a whole, as by Oikonomides, who contrasts the gifts

¹³⁵ See comments by Foss, *Ephesus*, and “Sardis”, or D. M. Metcalf (“How Extensive Was the Issue of Folles during the Years 775–820?” *Byzantion* 37 [1967]: 277 and 304) regarding Corinth, where the excavated area includes the 9th–10th-century *plateia*, though not the slopes of the Acrocorinth, where the 8th-century merchant area was probably located, and Athens, where the location of the urban center in the 8th–9th centuries is not known.

¹³⁶ C. Foss, “The Persians in Asia Minor and the End of Antiquity,” *EHR* 90 (1975): 721–47; W. Brandes, *Städte*, 146–49; Dagron, “Urban Economy,” 393–96.

¹³⁷ C. Morisson, “Byzance au VIIe siècle: Le témoignage de la numismatique,” in *Byzance: Hommage à André Stratos*, ed. N. Stratos (Athens, 1986), 1:149–63; Hendy, *Studies*, 641, with references.

or loans in kind made by Philaretos in Paphlagonia with the almsgiving in coin that was practiced in Constantinople during the same period.¹³⁸

However, on a few sites in better-favored localities, one can observe clues pointing to the persistence of exchanges, though certainly on a very reduced scale: in the German excavations at Magnesia on the Meander, there are no bronze coins of between 668 and 969 and just one miliaresion of Constantine V; at Priene (Fig. 6.7), halfway through an equally long lacuna, one miliaresion of Leo III and a follis of Leo V; at Ephesos (Fig. 6.8), nothing between Constans II and Leo VI, except one miliaresion of Constantine V found near the temple of Domitian;¹³⁹ at Sardis, only 11 coins for the period 668–886 (2 bronze coins of Constantine IV, 2 of Leo IV, 1 of Leo V, 2 of Michael II, 2 of Theophilos, 2 of Basil I), and a tremissis of Justinian II (Fig. 6.4). Similar markers have been found at the agora in Athens, where, between 668 and 820 (Fig. 6.5), all the reigns are represented except those of Nikephoros I and Michael I, and at Corinth, where a few examples from most of the reigns are listed, between the 96 bronze coins of Constans II and the 161 coins of Theophilos (Fig. 6.9). The presence of miliaresia among these haphazard losses has not been sufficiently stressed: nevertheless, it marks the relatively important role played by the new coin. At Athens, of 138 bronze coins dated to 668–820—only 54 if one excludes the 61 coins of Philippikos and the 23 coins of Leo III, which are considered correctly by Charanis to constitute a special case—one notes the presence of 8 folles of Syracuse (5 of Constantine IV, 1 of Justinian II, 1 of Leo III, 1 of Constantine V), evidence of the persistence of the port's links with Sicily and of the former's traditional role as a stopping-off point along the route that connected the island with the capital.

The situation in Sicily and Byzantine Italy has remained curiously outside the debate on the demonetization of Byzantium during the Dark Ages. This was not surprising in the 1960s, when the documentation was still very little known. Nowadays, Italian archaeologists and historians have succeeded in making great progress in this direction. The general picture, while still imperfect, is nonetheless clear: in eastern Sicily, notably, the evolution of the index, calculated on the basis of nearly a thousand coins—mostly bronze—derived from finds and local collections, is not dissimilar to that in the capital (Fig. 6.10). Certainly, the period between 668 and 811 was, here too, a time of retreat, but the contraction was far from total, and the intensity of the circulation is nearly comparable to that in the Justinianic period.¹⁴⁰ The growing regionalization of

¹³⁸ Metcalf, "Folles," esp. 304–5; Saraghane: M. F. Hendy, "The Coins," in *Excavations at Saraghane in Istanbul*, ed. R. M. Harrison, vol. 1 (Princeton, N.J.–Washington, D.C., 1986), 278–373; Brandes, *Städte*, 147–49; Oikonomides "Βαθμὸς," 365.

¹³⁹ Foss (*Ephesus*, app. 6) stresses that coin finds, insofar as there have been any (as seems likely) in excavations undertaken in the periphery of the city, have not been recorded.

¹⁴⁰ For Italy, see the assessment—with a detailed bibliography and list of finds prior to 1992, based on numerous data, from both unpublished sources and scattered publications—compiled by E. A. Arslan, "La circolazione monetaria (secoli V–VIII)," in *La storia dell'alto medioevo italiano (VI–X secolo) alla luce dell'archeologia* (Siena, 1994), 497–519, and, also under his direction, "Italia medievale," in *A Survey of Numismatic Research, 1990–1995* (Berlin, 1997), 447–68. For Sicily, G. Guzzetta, "Appunti di circolazione monetaria nella Sicilia Orientale bizantina," in *La Sicilia rupestre nel contesto delle civiltà*

the circulation of bronze coins, observed above, is very clear: on the other hand, in spite of the abundant local production of gold coins, preserved hoards, such as those of Milazzo or Capo Schisò (Naxos), buried ca. 683 and 797, are uniquely composed of nomismata of Constantinople. The latter may reflect a preference for coins of better fineness over the debased coins of Syracuse, as well as the island's still active commercial relations with the East.

In the theme of Calabria, though undoubtedly to a lesser degree than in Sicily—the sample is smaller by about half in terms of absolute value—one can observe a greater resilience of the monetary circulation in the years 668–881 than was the case to the east of the empire: the total absence of finds is limited to the years 775–802. The Sicilian mint supplied gold and bronze coins whose circulation was limited at first to Reggio and its immediate hinterland. However, the revival is observed already under Leo V (813–820) and affects a larger zone.¹⁴¹ The index (Fig. 6.14) evolves in part conversely to the one for Sicily, showing a very modest rise in the seventh century and a much more marked one in the ninth; it illustrates the way the southern part of the peninsula, especially Calabria, acted as a zone of refuge from the Arab advance into Sicily. In Rome, in the Crypta Balbi excavations, a few solidi, silver coins, and numerous bronze coins of 30 nummi were found in a well-stratified seventh-century context. Nearly all the copper coins were of different dies, and the presence of a few little Byzantino-papal silver issues as well as the existence of tesserae in the names of Popes Gregory III and Zacharias points to a persistent demand for low-value currency in the city.¹⁴² At Ravenna, prior to the Lombard conquest, the excavations at Classe and the collections in the museum bear witness to a retraction of the low-value currency and of links with the East, while also pointing to the maintenance and even the development of relations with Rome and Sicily.¹⁴³

Recovery and Expansion (ca. 820–1204) The frequency with which isolated or site finds occur increases perceptibly from the first half of the ninth century; over and above their regional variations (Fig. 6), the coherent nature of these evolutions has definitely

mediterraneae: Atti del sesto Convegno internazionale di studio sulla civiltà rupestre medioevale nel Mezzogiorno d'Italia Catania, Pantalica, Ispica, 7–12 settembre 1981, ed. C. D. Fonseca, (Galatina, 1986), 121–33; D. Castrizio, “Circolazione monetaria bizantina nella Sicilia Orientale,” *Sicilia Archeologica* 24.76–77 (1991): 67–75; G. Manganaro, “La collezione numismatica della Zelantea di Acireale,” *Memorie e Rendiconti dell'Accademia di Scienze, Lettere e Belle Arti degli Zelanti e dei Dafnici di Acireale* 10 (1970): 273–318.

¹⁴¹ G. Guzzetta, “Per la Calabria bizantina: Primo censimento dei dati numismatici,” in *Calabria bizantina: Istituzioni civile e topografia storica* (Reggio Calabria, 1986), 251–80. The data collected therein are the source for Fig. 6 (coin hoards have been excluded).

¹⁴² A. Rovelli, “La Crypta Balbi: I reperti numismatici,” in *La moneta nei contesti archeologici*, Atti dell'incontro di studio, Roma (1986), Istituto Italiano di numismatica, Studi e Materiali 2 (Rome 1989), 49–95; eadem, “La circolazione monetaria a Roma nei secoli VII e VIII: Nuovi dati per la storia economica di Roma nell'alto medioevo,” in *Roma medievale: Aggiornamenti*, ed. P. Delogu (Florence, 1998), 79–91.

¹⁴³ E. Ercolani-Cocchi, *Imperi romano e bizantino: Regni barbarici in Italia attraverso le monete del Museo Nazionale di Ravenna* (Ravenna, 1982); eadem, “La circolazione monetale fra tardoantico e alto medioevo dagli scavi di Villa Clelia,” *Studi Romagnoli* 29 (1978): 367–99.

been revealed, allaying the doubts that have been voiced, for some time now, about the new takeoff of money production and demand for money that began at that time. The main origin of this phenomenon is to be sought, as M. Metcalf and M. Hendy have both stressed, in an imperial initiative and probably in the modification of fiscal practices such as the revival or the development of the *antistrophe*.¹⁴⁴ The measures in question were not neutral and must have had a chain effect on the economy as a whole. They could promote the growth of products destined for commercialization, while military expenses, which “produced” increased security in the mid- or long-term, also created conditions favorable to a relative development of the agricultural economy in general, followed by that of exchanges and of the monetary economy in particular. The fact that Muslim bronze coins have been found in Corinth, albeit in low numbers, also points to the role of long-distance trade in this growth.¹⁴⁵

In the Balkans, according to the evidence of the numismatic documentation that Metcalf has analyzed in detail, the recovery came in two stages. During the first period (ca. 820–969), the growth rate was certainly significant but remained moderate, with the average annual index rising from 10 to 41 at Corinth and from 0 to about 7 at Athens (a rise of respectively 1% and 4% per year; Fig. 6), and the diffusion of coins continued to be concentrated in the coastal zones. During the second period, which started in the second half or at the end of the tenth century—969 is a convenient date, chosen because it marks the beginning of the issue of anonymous folles—the increase was more marked; at Corinth the index rose from 41 to 54 for the period from 969 to 1034, then to 91 for 1034–81 and even, though with a different denominational structure, to 126 for 1081–1143 and to 138 for 1143–1204, the respective figures at Athens being 7, then 13, then 56, with a decline to 33 between 1081 and 1143 and a marked recovery to 102 until 1204. This period also shows a more extensive diffusion of coins, since the number of sites outside central Greece to have produced monetary finds for the years 969–1056 is twice or three times that for the years 913–969, according to Metcalf’s findings.¹⁴⁶

In spite of this, we do not have a flawless general picture of the use of money. There are shadowy zones, which serve to confirm clues in the documents about the weak monetization of some regions, notably Kedrenos’ text on the taxation in kind that Basil II retained for the Bulgarians after his reconquest, possibly in accordance with the Slavs’ ancient cultural traditions, which have been frequently emphasized.

The monetization of the Balkans, with the exception of central Greece, the lower Danube region, and the princely residences and important strongholds of Bulgaria (Fig. 6.11–13), progressed only slowly in the course of the eleventh century and was further impeded in the 1030s and 1080s by troubles and incursions, which explains

¹⁴⁴ Metcalf, *South-eastern Europe*, 18; M. Hendy, “East and West: Divergent Models of Coinage and Its Use,” in *Il Secolo di Ferro: Mito e realtà del secolo X (Spoleto, 19–25 aprile 1990)* (Spoleto, 1991), 637–79; Laiou, “Exchange and Trade,” 733–34.

¹⁴⁵ G. C. Miles, “The Circulation of Islamic Coinage of the 8th–12th Centuries in Greece,” *Congresso Internazionale di Numismatica Roma, 1961*, II, *Atti* (Rome, 1965), 458–98.

¹⁴⁶ Metcalf, *South-eastern Europe*.

why the anonymous A- and B-class folles before 1034 are the best represented. Its real development came in the twelfth century, when the economic crisis and the military reversals of the 1070s–1090s, the cause of many emergency burials of precious metals, had been surmounted.

The details of monetary development in Asia Minor are much less well known. Since the publication of local collections (Fethiye, Afyon, Sinope, Silifke, Antakya) planned by a few teams of researchers is still being awaited, there is as yet little if any information about discoveries of isolated coin finds or hoards with established provenances. Thus most of our data are derived from about ten sites, mostly situated in the coastal zone and its immediate, most highly monetized hinterland, with the exception of Amorium.¹⁴⁷ The recovery in the coastal sites appears to have come later than in the Balkans, with the exception of Ephesos and Sardis. Although not as spectacular as at Athens, it is no less clear. By keeping to a period when the local currency consisted of a single denomination, the follis (even though the 11th-century drop in weight constituted a devaluation), the incidence of finds is multiplied by 3.6 at Ephesos between 969 and 1034, by 4.3 between 969 and 1081, at Pergamon by 5.8 or 10.4 for the same periods, and doubles at Sardis between 969 and 1081. The abundance of anonymous folles in the batches of Turkish origin on the European market in the 1960s has not been quantified, though it serves to confirm the phenomenon. For the twelfth century, the predominance in Asia Minor and in Thrace of finds of stamena can be observed, though no explanation is forthcoming, while in Greece tetartera and half-tetartera constitute the overwhelming majority.

As emphasized above, the recovery, regardless of its origins, occurred earlier in Italy than in the rest of the empire since it was felt in Calabria as early as 813. In Capitanata, to the north of the Ofanto River, it clearly coincided with Basil I's reconquest and was manifested with some force. Around Bari and in the south, the continuity was "more marked, albeit weaker," according to G. Guzzetta, who is not more specific.¹⁴⁸ The data gathered by L. Travaini for the whole of Apulia, starting only in 886 (Fig. 6.15), reveal a level comparable to that in Calabria, even higher with regard to the folles of the second half of the eleventh century, and due, in her opinion, to military operations or simply to the Byzantine presence, extended to 1071 instead of 1060. More than anything, I should emphasize the contrast between a Calabria that still looked toward Sicily, even after the Arab conquest, and an "Ionian" Apulia that was entirely turned toward Byzantium. In the latter, Constantinopolitan pieces of every kind of metal dominate, as is proven by the documents, together with finds and local collections. The absence of gold finds, apart from a single nomisma of Basil II in the Ortona hoard alongside 148 taris of Salerno, is not sufficient to refute all the evidence provided by archival documents about the use of gold coins, which were indeed real since pains were taken, in an age of devaluation, to specify their type using a whole set of epi-

¹⁴⁷ C. Lightfoot, "The Amorium Project: The 1997 Study Season," *DOP* 53 (1999): 338–40.

¹⁴⁸ G. Guzzetta, "Lineamenti di circolazione monetaria nella Puglia Settentrionale," in *La ricerca archeologica nel territorio garganico* (Foggia, 1984), 209–19.

thets.¹⁴⁹ In Calabria, on the other hand, while the Byzantine follis did indeed constitute the sole local small change, the gold mentioned in documents, notably in the *Brebion* of the metropolis published by A. Guillou,¹⁵⁰ is the Sicilian tari, the money of exchange with the island and, above all, the coin used in the silk trade. It is not surprising to find zones of circulation overlapping political boundaries; this phenomenon occurs frequently in frontier regions that served rather to unite than to divide.

The End of the Hegemony and the Penetration of Foreign Money (1204–1453) By the end of the twelfth century, especially from 1204 on, the political fragmentation of the Byzantine world brought about the creation of coinages that were either “national” (in Trebizond starting in 1222, in Bulgaria starting in 1218, and in Serbia in 1228), colonial, or feudal.¹⁵¹ These coins brought about a corresponding reduction in the diffusion of the imperial coinage, which they often copied. This was the case with the imitation stamena and hyperpyra that were struck after 1204 in Constantinople and Thessalonike and have been identified by Hendy.¹⁵² The fact that neither the Latins nor the Venetians introduced coins in their name or type shows how strong a hold the Byzantine model retained. After an eclipse at the beginning of the century, the hyperpyron recovered some vitality in the 1230s, as demonstrated by Romanian, Bulgarian, and Greek hoards. It continued to be fairly widespread until around 1330 and to be mentioned in textual sources as late as 1387, even 1402,¹⁵³ though it had not been struck since 1353. The Venetian gold ducat and its imitations took its place in the long-distance Aegean trade of the second half of the fourteenth and the fifteenth century; at Constantinople the gold Venetian coin (τὸ χρυσοῦν καὶ βενετικὸν νόμισμα) was then the reigning coin,¹⁵⁴ though not the commonest one.

In fact, other Venetian coins had already penetrated the monetary circulation in Byzantium, including the remaining territories under the empire’s control. Between 1286 and 1374 the Athonite documents refer to hyperpyra that were paid in Venetian ducats (διὰ δουκάτων βενετικῶν) or in “ounces of ducats,”¹⁵⁵ and hoards confirm the current use of silver grossi, from Thrace to the Peloponnese from the 1270s to the mid-fourteenth century.¹⁵⁶ The shrinkage of the imperial territory in the fourteenth

¹⁴⁹ J.-M. Martin, “Economia naturale ed economia monetaria nell’Italia meridionale longobarda e bizantina (secoli VI–XI),” in *Storia d’Italia, Annali 6: Economia naturale, economia monetaria*, ed. R. Ruggiero and U. Tucci (Turin, 1983), 181–219. L. Travaini, *La monetazione nell’Italia normanna* (Rome, 1995), 88–91, 362–94.

¹⁵⁰ A. Guillou, *Le brébion de la métropole byzantine de Région (vers 1050)* (Vatican City, 1974).

¹⁵¹ P. Grierson, *Byzantine Coins* (London, 1982), 269–75; D. M. Metcalf, *Coinage of the Crusades and the Latin East* (London, 1995); *DOC* 4.1:135–37; *DOC* 5.1:37–38.

¹⁵² Hendy, “Coinage,” 191–223.

¹⁵³ M. Balard, “Monete bizantine e monete occidentali a Bisanzio dall’ XIII al XV secolo,” in *La cultura bizantina* (as above, note 93), 263–67.

¹⁵⁴ P. Canivet and N. Oikonomides, “Jean (Argyropoulos) ‘La comédie de Katablattas’: Invective byzantine du XVe siècle,” *Διπτυκά* (1982–83): line 292.

¹⁵⁵ In T. Bertelè, *Moneta veneziana e moneta bizantina* (Florence, 1973), 58–61.

¹⁵⁶ M. Galane-Krikou, “Συμβολή στην κυκλοφορία βενετικών γρόσσι 13–14 Αι. στον Ελλαδικό Χώρο,” *Αρχαιολογικά Ανάλεκτα εξ Αθηνών* 21 (1988) [1993]: 163–84.

century had a corresponding effect on the area where Byzantine coins were used. The stavraton and its fractions were apparently not used outside the capital and its hinterland, and they coexist in finds alongside growing proportions of foreign coins. One Balkan hoard (Bulgarian?, deposited ca. 1380), includes 40 coins of John V and Andronikos IV, 15 Bulgarian, and 3 Serb coins; the find at Belgratkapi (Istanbul, deposited ca. 1390) contains 2,280 quarter stavrata and 1,221 follari of John V, with some 500 Bulgarian, Venetian, Ottoman, and other coins; at Çorlu (deposited ca. 1443) there are 1,630 pieces of John VIII and 2,000 aqces. Books of accounts, such as Badœr's, and references in manuscripts also illustrate this monetary variety, indicative of both the way the markets opened up in the wake of the commercial revolution and of Byzantium's economic decline and inability to impose the exclusive tender of its currency in its territory, thus losing a great part of the profits due from seigniorage, which, in the West, could amount to 5% during the fourteenth century. It is understandable why this invasion, which was even worse in the Morea, where the despots struck no coins, caused Plethon to engage in the following bitter reflections: "Furthermore, one cannot fail to observe the urgent need to remedy the state of our coinage; for it is truly absurd to employ these foreign copper pieces which are also false coins, for which others reap the profit, whereas we, for our part, retain only the ridicule."¹⁵⁷

Judging by the reduced number of finds on sites and the scarcity of hoards, it would seem that monetization diminished, even prior to the recession of the fourteenth century, never to recover the peaks of the twelfth century (see Figure 6.10). This "monetary impoverishment" applies not only to Byzantine finances but to the whole economy; by the beginning of the fifteenth century, both demand and exchanges seem to have been increasingly concentrated within the transit islands that Constantinople and Thessalonike had become. However, it was precisely because demand had declined that Byzantium does not appear at this date to have suffered from the bullion famine then affecting the West.

The Diffusion of Byzantine Money outside the Empire

The situation in these last two centuries stands in cruel contrast with the monopoly that Byzantine currency had enjoyed until the twelfth century, within its own frontiers and through its diffusion in the lands beyond—a measure of its political and economic influence. The traces of this diffusion are provided not only by monetary finds, set alongside references in textual sources, but also by the imitations of Byzantine monetary types, which point to the influence of imperial prototypes and to at least indirect knowledge of them. The documentation is biased because it has been so unevenly preserved in modern times, but also because certain medieval states probably melted down Byzantine coins in order to use the precious metals for minting their own coin-

¹⁵⁷ Ed. P. Lambros, *Παλαιολογία καὶ Πελοποννησιακά* (Athens, 1923), 3:262; cf. D. Zakythinis, *Le despotat grec de Morée*, 2 vols. (Athens, 1953), 2:266–67.

ages. These factors combine to explain the imbalance in favor of eastern and northern Europe, where finds are relatively more numerous than in the West. Nevertheless, it is not clear whether or not this superiority reflected a privileged orientation in their commercial relations. This is why isolated finds of bronze coins would serve as a better, or a less inadequate, tracer.

Despite the absence of a detailed synthesis of a very scattered numismatic documentation¹⁵⁸ and the risk of oversimplification, it is interesting to compare these sources with the actual state of our knowledge about the trade of the empire. Here, too, three periods can be distinguished: the seventh to eighth centuries until ca. 820, from 820 to ca. 1000, and the eleventh to twelfth centuries.

In the seventh to eighth centuries, noneconomic exchanges are reflected in the *solidi* found in China (rare witnesses to attempts at establishing diplomatic contacts) and in Avar territory, and partly in the *solidi* that reached the Ukraine, in southern Russia, Khazar territory, and the lands of the Caucasus. In the last case, the payment of *solidi* and hexagrams to the allies of Herakleios constituted a kind of economic exchange insofar as services, in this case of a military nature, were purchased. This also applies to the tribute that was paid to the Avars until the reign of Constantine IV, since it purchased security and replaced direct military expenditure (one wonders how efficiently).

If we restrict ourselves to direct “economic” exchanges, we should note two facts: the persistent penetration of Byzantine money into Umayyad Syria-Palestine until ‘Abd al-Malik’s reform (693/4) and the continuance of relations with the West. In the latter case, the numismatic evidence is amply confirmed by finds of eastern amphoras and African *sigillata*. The gold of Constantinople was presumably melted down by Merovingian mints in the south of France and by the mint in London from the end of the sixth century, though it did leave a few traces in the regions along the Rhine until 620. However, the seventh-century bronze coins found in France, Switzerland, and Germany, west of the Rhine, point to the predominance of the African trade, compared to exchanges with Constantinople or Sicily. The role of the latter trade must be stressed, though, because gold of Syracuse was still reaching the West in the eighth century (a *solidus* of Leo III in Kent, of Constantine V near Schwerin, *folles* of Constantine V and Leo V in Austria, etc.).

For the middle period (early 9th century to the year 1000), we can note the traces left by Theophilos’ diplomatic initiatives on the shores of the Baltic (a seal belonging to the *patrikios* Theodosios and a *nomisma* of Theophilos were found in the Haithabu excavations), and, above all, the evidence that Muslim and Byzantine gold pieces were used in conjunction, which could only have happened in the course of commercial exchanges: the Bologna hoard (*terminus post quem* [t.p.q.] 811) includes 5 *nomismata*

¹⁵⁸ C. Morrisson, “La diffusion de la monnaie de Constantinople,” in *Constantinople and Its Hinterland*, ed. C. Mango and G. Dagron (Aldershot, 1995), 77–89 (brief bibliography). For the Veneto, see *Ritrovamenti monetali di età romana nel Veneto*, ed. G. Gorini (Padua, 1992–), 9 vols. of which have been published.

of Constantinople (751–811), 2 solidi of Benevento, and 14 Abbasid dinars (755–813); that of Hon (Norway; t.p.q. 855) contains 2 solidi (Constantine V, Syracuse, and Michael III, Constantinople), 6 Carolingian and 10 Abbasid coins (770–849) in a context that is more Mediterranean and western than Scandinavian; and that of Porto Torres (Sardinia; t.p.q. 902) holds 47 nomismata of Constantinople (830–879) and 3 Aghlabid dinars (874–902). Though closer to Byzantium, exchanges with the Bulgarians have left few monetary traces; nevertheless, finds of folles from the end of the ninth century and, especially, the tenth century on a site such as Pernik are thought to indicate commercial relations at local market level.¹⁵⁹

On the other hand, there are clear signs of a developing trade with Russia and a revival of trade with central and western Europe around the year 1000 along the Danube and the Adriatic coastline. For one thing, the Byzantine finds that occur in increasing numbers along the course of the Dnieper, though very much in the minority compared with western denarii, consist of a mixture of coins, evidence that the “Varangian route to the Greeks” had a mercantile and not merely a military role. The imitation miliaresia of John I and Basil II that were struck in Kievan Rus, as well as in Finland, Sweden, and Denmark, demonstrate the extent of the coin’s diffusion and reputation. Furthermore, the penetration of Byzantine coins within German, Austrian, and Slovenian territory, which had not completely stopped between 642 and 867, intensified. The anonymous folles (primarily A2) are present over a vast zone. In the Germanic lands and in France, these merely constitute isolated witnesses to the passage of merchants or pilgrims, but in northern Italy, as in Campania and Salerno, the follis was circulating properly and used as divisional money.

We know more about the development of international exchanges in the eleventh and twelfth centuries from textual sources than from monetary finds. The explanation for this discrepancy undoubtedly lies in the West’s need for gold to meet its trading deficit with the Levant and the considerable costs of the crusades. Indeed, German, English, and French archival documents of this period, and even in the thirteenth century, often refer to the *bezant*. It would be wrong to interpret it as money of account or a generic term. The evolution of the *cens* due to the Holy See¹⁶⁰ shows, within the overall increase in gold payments as opposed to silver during the twelfth century, the progression of *bezants* in relation to indeterminate *aurei* of before 1130, even though they played a lesser role, compared with Muslim or imitation *marabotini* from Spain.

Relations with Foreign Coinages: Exchanging Byzantine Coins

Little is known about the exchange rates for Byzantine currencies and foreign coinages prior to the commercial revolution of the twelfth century. Reports from embassies, such as those of Liutprand and his father at the imperial court, say nothing about the

¹⁵⁹ I. Iurukova, “Monety,” *Pernik* 2 (1983): 104–5, 169.

¹⁶⁰ A. Chédeville, “Recherches sur la circulation de l’or en Europe occidentale du Xe à la fin du XIIe siècle d’après les cens dus au Saint-Siège,” *Le Moyen Age* 83 (1977): 413–43.

conditions under which ambassadors procured, in Venice (?) or in Constantinople, the Byzantine coins they needed to cover their expenses in the capital. Abundant though they are, documents in southern Italy tell us nothing about the rate of exchange between the tari and the nomisma, though a Venetian document of 1000 or 1001 indicates that 4 *bisantii aurei* were worth 2 pounds of denarii, or 1 nomisma 120 denarii,¹⁶¹ whereas in Hungary, the nomisma (*pensa auri*), initially valued in trade at 30 denarii (of the Bavarian type, the prototype for the Hungarian coinage), was subsequently fixed at 40 deniers by Bela I (1061–63).¹⁶² In the twelfth century, the various accounts of the crusades and a few Venetian documents give values for the hyperpyron expressed in a variety of denarii (in 1196 = 480 Venetian denarii) or in silver marks, corresponding to a weight between 28 g and 60 g of fine silver. According to Odo of Deuil, French Crusaders changed a *staminum* for 5 denarii (*parisis?*) in the Balkans, for 5 or 6 in Asia Minor, and for only 2 at Constantinople, thanks to the agreement that had been concluded with Manuel I. At 0.39 g of fine silver each, these 2 denarii that were exchanged for a piece with a theoretical value of $\frac{1}{48}$ of a hyperpyron (3.65 g fine gold) imply a gold:silver ratio of 1:10.3, which is not far from the 1:11.9 ratio that has been deduced from the explicit accord drawn up between Frederick I and Isaac II, fixing the price of the mark (231.16 g silver) at 5½ hyperpyra (19.4 g gold), i.e., 1 hyperpyron to 42 g silver.¹⁶³

The Venetian documents assembled by Bertelè allow us to follow the decline of the hyperpyron in terms of the hard currencies that replaced it as international media of exchange in the thirteenth century.¹⁶⁴ The currency market was henceforth open: the treaty of Nymphaion (1261) authorized the export of hyperpyra, and we know they also reached Venice where they were melted down. The export of silver and gold from Venice to the Levant was certainly far more important than currency movements between Venice and Constantinople. However, the galleys that transported silver to Constantinople and the Black Sea brought back gold, and Byzantine gold, along with gold from the Sudan, Germany, and Transylvania, continued to support the abundant minting of ducats that took off at the beginning of the fourteenth century. The rate of exchange for hyperpyra and ducats (see Table 7) was determined primarily by their respective precious metal content. However, the rate of 2 hyperpyra to a ducat in the middle of the fourteenth century overestimates the Venetian coinage by some 10% and

¹⁶¹ B. Callegher, “Presenza di ‘folles anonimi’ in Italia settentrionale: Un’ipotesi interpretativa,” *Numismatica e antichità classiche. Quaderni Ticinesi* 23 (1994): 293–312.

¹⁶² B. Homan, “La circolazione delle monete d’oro in Ungheria dal X al XIV secolo e la crisi europea dell’oro nel secolo XIV,” *RIN* (1922): 111.

¹⁶³ Hendy, “Coinage,” 14, 21; A. E. Laiou, “Byzantine Trade with Christians and Muslims and the Crusades,” in *The Crusades from the Perspective of Byzantium and the Muslim World*, ed. A. E. Laiou and R. Mottahedeh (Washington, D.C., 2001), 158–96. Bertelè, *Moneta veneziana*, 31–34. Fluctuations in the value of the hyperpyron, given that its precious metal content was stable, were due to the greater or lesser rigidity of the market and above all to variations in the gold:silver ratio.

¹⁶⁴ Bertelè, *Moneta veneziana*, appendix 3, 39–58 (figures in Venetian grossi have been converted to hyperpyra according to the number of grossi to the ducat in the relevant period).

Table 7
The Hyperpyron in Venetian Gold Ducats

Date		
1315	1 hyperpyron = $\frac{2}{3}$ ducat	1 ducat = 1.5 hyperpyra
1323	1 hyperpyron = 0.58 ducat	1 ducat = 1.75 hyperpyra
1333	1 hyperpyron = 0.48 ducat	1 ducat = 2.08 hyperpyra
1367	1 hyperpyron = $\frac{1}{2}$ ducat	1 ducat = 2 hyperpyra
(accounts for the expedition of Amadeus IV of Savoy)		
1382–91	1 hyperpyron = $\frac{2}{5}$ ducat	1 ducat = 2.5 hyperpyra
1397–1411	1 hyperpyron = $\frac{3}{10}$ ducat	1 ducat = $3\frac{1}{3}$ hyperpyra
(official exchange rate for galleys)		
1413–20	1 hyperpyron = 0.26 ducat	1 ducat = 3 hyperpyra 18 carats
1432–52	1 hyperpyron = 0.28–0.34 ducat	1 ducat = 3 hyperpyra 12 carats to 22 hyperpyra 22 carats (Badoer and Barbarigo's accounts)

is evidence of the suspicion with which the “discredited” Byzantine coinage was viewed. Its fall cannot be attributed solely to the crisis of public finances.¹⁶⁵

The declining value of the silver hyperpyron, compared with the ducat, dates from the turn of the fourteenth century. It antedated the reduction in fineness observed under John VIII (1425–48); in the same way, the reestablishment of the exchange rate with an average value of 3 hyperpyra to the ducat preceded the return under Constantine XI (1448–53) to the purity of the first issues in the fourteenth century. As might be expected in theory, this discrepancy shows that the essential element in fixing this rate was the evolution of the gold:silver ratio, itself influenced by mine production, which we know to have been particularly abundant in Serbia and Bosnia between 1400 and 1420, after which output again diminished.¹⁶⁶ The relative stability of the precious-metal coinage at the end of the empire affords a glimpse of the way the coinage was controlled privately and was thus removed from the imperial finances and their notorious indigence, quite the opposite situation to the one that undoubtedly prevailed from the beginning of the empire until the reign of the first Palaiologoi.

¹⁶⁵ F. C. Lane, “Exportations vénitiennes d’or et d’argent de 1200 à 1450,” in *Etudes d’histoire monétaire*, ed. J. Day (Lille, 1984), 32–33; Hendy, *Studies*, 546–47; Morriison, “Monnaie et finances dans l’Empire byzantin,” 312–13.

¹⁶⁶ Spufford, *Money*, 349–51.

A Note on Monetary Mechanisms, East and West

John Day

By the age of Justinian the monetary institutions of the Byzantine Empire already differed substantially from those of Latin Europe. In Byzantium the coinage continued to serve as an instrument of power in a centralized state at a time when it was increasingly fragmented—and increasingly rare—in the barbarian West (feudalism was born in the 7th century, writes Peter Spufford, when the Frankish kings ran out of gold to pay their armies).¹ If the Carolingian reforms marked the return to a uniform coinage system in the western empire—but based on a silver denarius rather than a gold solidus—the process of monetary disintegration resumed under Charlemagne's successors with the concession of minting privileges to great vassals or subject towns who altered the characteristics of the coins at their pleasure.

It was the disappearance of gold coinage in most of Europe and the general retreat from a market economy that consecrated the divorce between monetary practices East and West. But the economic expansion of the twelfth to thirteenth centuries, marked by the activities of western traders and Crusaders in the Levant, initiated a movement of convergence. The conjunction remained incomplete, however, because the western economies were soon embarked on the adventure of merchant capitalism based on monetary institutions and capital resources that were without their equivalent in Islam and Byzantium.²

In medieval Europe, long-term economic movements and long-term monetary movements were inseparable because the former were dependent in large measure on the *supply* of money (and not the other way around, as in the case of modern economies), that is, on the production and distribution of the monetary metals. Moreover, in that age of metallic circulation, the supply was never equal to the demand, resulting in constant complaints that money was “scarce” (in some periods, obviously, more than

¹ P. Spufford, *Money and Its Use in Medieval Europe* (Cambridge, 1988), 16.

² It should be noted that Byzantium was perhaps less backward in this respect than the dearth of documentation suggests, as witness its integration into the Italian world of maritime trade (albeit as a “junior partner”) in the late Middle Ages. A. E. Laiou, “The Byzantine Economy in the Mediterranean Trade System, Thirteenth–Fifteenth Centuries,” in Laiou, *Gender, Society and Economic Life in Byzantium* (Hampshire, 1992), 172–79.

in others) and in what Marc Bloch termed “the obscure need to inflate the currency.”³ In practice, except in the case of the deliberate manipulation of the coinage as a revenue measure, the minting authorities “inflated the currency” to offset a rise in the price of the monetary metals which posed a threat, by virtue of Gresham’s Law, to the current circulation.

In Byzantium, as late as the twelfth century, the permanent stock of monetary metals seems on the whole to have remained remarkably stable. Irrecoverable losses were replenished from new mine production, tribute from foreign rulers, or favorable trade balances, so that there existed in practice the sort of equilibrium evoked by those economists who postulate the neutrality of money and the necessary adjustment of the money supply to the state of trade. The “equilibrium,” not surprisingly, extended to the prices of most commodities, some of which owed their relative stability, however, to government controls, particularly in times of crisis.

In the medieval European economies, on the contrary, not only were monetary stocks chronically insufficient, but their distribution often responded to the non-economic imperatives of “guerres monétaires” (competitive debasements) in a never-ending “struggle for bullion.” The movement of prices, for its part, tended to mirror fluctuations in the money supply, and price and wage controls, for example in the wake of the Black Death, proved impossible to enforce.⁴

Because of the constant flux and reflux of monetary stocks according to harvest cycles, shipping movements, trade fairs, the tax calendar, and the international balance of payments, it is difficult to follow the process of monetization of the medieval economy which, in any case, was far from uniform or irreversible. In Europe, despite the development of credit and even, in some instances, of substitutes for metallic currency such as bank money, deposit certificates, or financial clearings, barter continued to play an important role in economic relations precisely because the circulation was limited and inelastic. But by the time of the Crusades it was no longer practiced on a grand scale, except in trade with the Levant where parallel price lists confirm that cash prices were invariably lower than barter prices,⁵ a fact that went hand in hand with a regular premium on silver bullion or coin. Barter, in short, continued to flourish in the Levant trade because of the persistent shortage of cash and the backward state of credit.

It should be noted that in this instance a low degree of “monetization” (the proportion of transactions conducted with the actual physical exchange of coins or surrogate currencies), which necessitates recourse to the exchange of goods for goods, does not signify a primitive system of exchange (any more than swap agreements between nations do today), let alone a “natural economy.”

³ M. Bloch, *Esquisse d'une histoire monétaire de l'Europe* (Paris, 1954), 63–65. Cf. J. Day, “L’histoire de la monnaie dans les écrits de Marc Bloch,” in *Monnaies et marchés au Moyen Âge* (Paris, 1994), 271–81.

⁴ Cf. J. Day, “Crises et conjonctures à la fin du Moyen Âge,” in *Monnaies et marchés au Moyen Âge* (as above, note 3), 213–49.

⁵ E. Ashtor, “Pagamento in contanti e baratto nel commercio italiano d’oltremare, secoli XIV–XVI,” in *Economia naturale, economia monetaria*, ed. R. Romano and U. Tucci, *Storia d’Italia, Annali 6* (Turin, 1983), 363–96.

The choice of the type of coinage (one is reminded of Marc Bloch's characterization of gold coins as a "monnaie de classe") depended in the first instance on the kind and quantities of monetary metals available for minting. Because of an acute shortage of silver, Portugal, in the first half of the sixteenth century, then one of the great European powers, relied on a domestic circulation of pure copper coins (silver and gold coins were reserved for international accounts).⁶ But the choice could also be determined simply by custom. At Genoa in the seventeenth century, to cite a postmedieval example, it was the practice to pay for Lombard grain and bills of exchange in gold scudi, while silk from Calabria and Genoese customs duties were paid in silver scudi, and French and English grain merchants insisted on Spanish reales.⁷ In the absence of statements of payment or similar documents with breakdowns by type of coin, one is left in the dark about monetary usages in Byzantium, except as revealed through the analysis of coin hoards, but they were probably at least as unpredictable as in the West.

The "problem of the standard" (to use the expression of another age) that afflicted the European economies in the late Middle Ages was the result of fluctuations in the prices of gold and silver or the deterioration of the coins in terms of which prices were expressed (the "link money" or money of account).⁸ The creation of new standards, or accounting systems, in an effort to stabilize the currency, occurred as a rule on the occasion of the creation of a new coin type; for example, the Venetian silver grosso of ca. 1200 at 24d. (2 shillings), the Florentine gold florin of 1252 at 20 silver florins of 12 billion piccoli each, the French écu of 1266 equal to 10 gros tournois or 120 deniers tournois. In all of these cases the authorities attempted unsuccessfully to incorporate coins made of different metal in a single standard.

The Venetian grosso at 24d. rose almost immediately to 26d., then to 32d. because of the deterioration of the piccolo giving rise to a parallel standard based on the prestigious grosso, which remained perfectly stable for the next 150 years. Similarly, the florin and the écu rapidly detached themselves from the silver-based currency because of the rise of gold and the inevitable deterioration of the billon money. On account of the impossibility of enforcing a legal bimetallic ratio (in practice, the price of gold coins in terms of silver coins), parallel gold and silver or gold and silver-billon standards were in fact common, especially in the period 1250–1350 (after the return to gold coinage in the West) when the market ratio was changing rapidly, first in favor of gold, then in favor of silver.

In the course of time, bimetallic systems were abandoned or transformed into monometallic systems, normally while retaining their former designation. The Venetian "ducat" of 124 soldi. from the early sixteenth century on was actually a silver-based money of account. The Genoese and Milanese "florins" of 25 soldi and 32 soldi respec-

⁶ J. Day, "The Problem of the Standard in Preindustrial Europe," in *Money and Finance in the Age of Merchant Capitalism* (Oxford, 1999), 59–109.

⁷ G. Gianelli, "Problemi monetari genovesi del Seicento: La questione della 'moneta specifica,'" in *Scritti in onore del professore Paolo Emilio Taviani* (Genoa, 1983–86), 1:177–94.

⁸ For what follows, see J. Day, "Les monnaies de compte médiévales et le problème de l'étalon," in *Monnaies et marchés au Moyen Age* (as above, note 3), 251–70.

tively became simple notional multiples of the devalued billon currency after about 1400. The various systems of account based on the gros tournois and a current gold piece in France in the fourteenth century all ended up as gold standards alongside the silver-billon standard (the livre tournois).

The old debate concerning the nature and function of the money of account, sometimes referred to as “ghost money,” was confined, not by accident, to continental scholars (Marc Bloch, Hans van Werveke, Henri Laurent, the economist Luigi Einaudi). England in fact remained faithful to the sterling standard, which first suffered serious reductions in weight in the course of the late medieval “bullion famine” but never a reduction in fineness. Debased billon money, elsewhere the basis of the system of account, was unknown. The basic denomination, the penny—as well as the halfpenny and farthing—was of good silver. And gold money was quoted in sterling. Hence it was not necessary to invent a “money of account” to accommodate a heterogeneous and unstable circulation as in continental Europe.

The second major cause of monetary instability—the deterioration of the silver-billon circulation through wear and tear, clipping, culling, and counterfeiting—made it impossible to continue coinage at the current mint standard since newly minted pieces would immediately have fallen victim to Gresham’s Law. To escape the consequences of monetary deflation, induced by the recall and recoinage of the entire circulation, one solution was to abandon the minting of the basic coinage altogether. This is what occurred, for example, in the fourteenth to fifteenth centuries in Catalonia, where the king was forbidden by statute to “mutate” the ancient *diner de tern*. The public came to accept worn Aragonese *diners* or Valencian *menuts* at their nominal value in small transactions but insisted on gold florins or silver croats in large transactions. A similar situation existed in seventeenth-century England, where the sterling money deteriorated by half in silver content leading to the famous polemic that pitted John Locke and the stable money school against the “devaluationists”.⁹ In both cases the result was a semi-fiduciary circulation imposed by statute and by custom, as was also the case in Byzantium with respect to the billon and copper coinage. Another solution was the substitution of a new piece of greater intrinsic as well as nominal value as the basis of the system of account: *quattrino* for *piccolo* (Florence), *soldino* for *piccolo* (Venice), *blanca* for *dinero* (Castile), *schilling* for *witten* for *pfennig* (Lubeck).¹⁰ The original link moneys, if they continued to be minted, usually ended up as token currencies of pure copper or close to it and almost too small to handle.

The “problem of the standard” does not seem to have been posed in the same terms in the Byzantine Empire, at least as long as the state enjoyed a monopoly of minting, also because electrum coinage (debased simply by raising its silver content) was preferred to an inherently unstable “bimetallic” system as in the West. In fact, what chiefly distinguished the monetary experience of the Byzantine Empire during most of its long history was the state’s surprisingly effective control over mint output and the

⁹ Day, “The Problem of the Standard.”

¹⁰ Day, “Les monnaies de compte médiévales.”

money supply and, to a lesser degree perhaps, over prices and the trade in precious metals. As late as the fourteenth century, monetary policy was shaped more in the interests of the imperial finances than in the interests of trade, which doubtless helps to explain the penury of merchant capital and the absence of the sort of financial institutions that developed among Byzantium's western trading partners.

Minting activity and monetary circulation in the eastern Mediterranean in the twelfth to fifteenth centuries depended in large measure on precious metals originating in the West.¹¹ This unilateral movement of metallic stocks was due essentially, as noted elsewhere, to a permanent deficit in the European balance of trade. It was the specie and bullion introduced by western merchants and Crusaders that permitted the return to silver coinage in the East after two centuries of a monetary circulation based on copper and gold. As time passed, the better-known European currencies, the Venetian grosso and ducat, the Florentine florin, the Neapolitan carlino, mingled with and on occasion supplanted the Muslim and Byzantine coinages. "There came a day in the fourteenth century," wrote Marc Bloch, "when hyperperes were valued in ducats."¹² It is not surprising, therefore, that at the end of the fourteenth century the decline in European stocks had severe repercussions in the East. According to a contemporary, the year 1398 marked the start of a veritable silver famine in Egypt, where "the minting of dirhams was very infrequent so much silver had been wasted in the manufacture of saddles, silverware, etc. and also because it had ceased to arrive from the country of the Franks."¹³ The crisis in minting assured the triumph of the Venetian ducat. The Egyptian chronicler al-Makrizi reported at that time that "the circulation of the ducat had spread to the principal cities of the (Muslim) world to the point of becoming the common currency of trade."¹⁴ And a Venetian text a few years later confirmed that Syrian merchants insisted on being paid in ducats rather than silver. But it was silver that normally enjoyed a premium in the eastern Mediterranean (even resulting for a time, in the 14th century, in a speculative "exchange of metals" between Venice and Constantinople). This phenomenon seems to have been due, in the first instance, to the insatiable demand for silver emanating from the Indian subcontinent, which also helps to account for the chronic shortage of silver currency on the eastern markets. Emmanuel Piloti evokes in this connection a sort of monetary frontier limited to the ducat: "The merchants of Venice procure their spices at Damascus and Alexandria because their gold money is not current in India or the Spice Islands."¹⁵ In other words, most of the 300,000 or so gold ducats shipped from Venice to the Levant in normal years in the fifteenth century remained in that region. It would seem, therefore, that the essential reason for the success of the ducat on the markets of the eastern Mediterranean in the late Middle Ages was the deterioration, followed sometimes by

¹¹ See J. Day, "Colonialisme monétaire en Méditerranée au Moyen Age," in *Monnaies et marchés au Moyen Age* (as above, note 3), 145–47, for references.

¹² M. Bloch, "Le problème de l'or au Moyen Age," in Bloch, *Mélanges historiques* (Paris, 1963), 2:860.

¹³ Day, "Colonialisme monétaire," 145–47.

¹⁴ Day, "Colonialisme monétaire," 145–47.

¹⁵ Day, "Colonialisme monétaire," 145–47.

the disappearance, of the local silver currencies, which was caused by the accelerated drain of that metal to India and the Far East. This movement combined with the wastage of metallic stocks in war and their immobilization in gold and silver artifacts to exacerbate the effects in the Levant of the crisis in mining and minting in Europe.

Given the monetary dependence of the Near East on the European mining industry in the twelfth to fifteenth centuries, it is not surprising that the two regions shared a common economic destiny, at least if one subscribes to Fernand Braudel's view that monetary movements are the "transmission belt" of the economic conjuncture. Population, land settlement, commerce, manufacturing, and the monetization of the economy were making rapid strides in the East as well as in the West by the time of the First Crusade, and the movement seems to have shifted into high gear in both regions in the twelfth to thirteenth centuries. In the crisis years of the fourteenth to fifteenth centuries, on the other hand, the Levant's monetary dependence on Europe operated in a negative sense and was naturally overshadowed by the Turkish conquests.

The Role of the Byzantine State in the Economy

Nicolas Oikonomides

The adherence of Byzantium to tradition was a feature of every aspect of state life, profoundly affecting relations between the state and the economy and determining the extent to which the former intervened in the latter. However, although the state's theoretical principles were, of course, founded on tradition, when the time came to put them into practice a realistic approach prevailed: theory survived and continued to have its effect, though without substantially altering the true situation. Those in power intervened frequently in economic life and at many points of it, working on the basis of the old theory that the purpose of action of any kind was to foster the smooth operation of the state machine, of the empire "by the grace of God." In reality, however, the changes that came about were profound, and they came about without disturbing the theoretical surface of the omnipotence of the state, and of the emperor in particular.

It has been said that Byzantium had a "directed" economy, since the intervention of the state was manifest even in relation to activities, such as trade, that would normally be beyond such controls. This description has now been abandoned, and the economy of Byzantium is now seen as "restrained" by the state; in other words, it was an economy that functioned on the basis of the freedom of transactions but in which the state intervened to prevent the excessive accumulation of wealth, the suppression of the weakest, and the exploitation of the citizens/consumers. Where this intervention is concerned, the Byzantine state was substantively different from the medieval states of western Europe, which functioned under a system of effective decentralization.

One of the unchanging characteristics of the Byzantine administration was its centralization: everything passed through the center, everything was controlled from the center. Here there was a fundamental contradiction between theory and reality, since in actuality phenomena of decentralization are often to be observed. However, the contradiction was blunted by the adaptability of the Byzantine state, which was able, when necessary, to confine its control to the bare essentials. In the last centuries of Byzantium, a degree of decentralization is evident, but even then the state kept control

of many parts of the decentralized economy, determining the tax obligations of even those peasants who lived on land from which it collected nothing.¹

Sources

The fact that the Byzantines were so attached to tradition causes problems when one is assessing the reliability of the source material, especially since very few archives have survived, and consequently it would be futile to hope to assemble a long series of information of an economic nature. No more than a few thousand Byzantine documents of the seventh to the fifteenth century have survived to the present day, and of course they cover the entire spectrum of life. Furthermore, the majority of these documents come from monastic archives in specific areas (such as Mount Athos, Patmos, western Asia Minor, Chios, Pontos, and Thessaly), and the information they contain concerns economic activities of a specific kind, principally the cultivation, on the sharecropping system, of land that was (or might become) privileged since it belonged to monasteries. Needless to say, the existence or otherwise of privileges is of decisive importance in determining the role of the state in the agricultural economy.

It is true, of course, that the monastic archives also contain documents concerning private property, usually land belonging to lay people that subsequently came into the possession of the monastery by purchase, by donation, or by the owner becoming a monk in the foundation. There are not many of these documents, however, and the laymen to whom they refer were often privileged.

Where the role of the state in other forms of economic life—trade, manufacturing, the exploitation of raw materials—is concerned, there is in effect no archival material at all. The comparatively few documents that have survived are mostly in Italian archives and deal only in passing with the Byzantine state.

It follows that the primary sources upon which we might have expected to be able to draw for information about the role of the state in the economic life of the country are very scanty, almost nonexistent. Technical texts that preserve details and information of incontrovertible accuracy about the public economy—such as the detailed lists of expenditure on the campaigns against Crete in 911 and 949, discussed later (p. 1015)—are rare. Most of our information comes from sources of a narrative or regulatory nature.

The narrative sources sometimes relate what was said about this or that measure that the emperor had taken, frequently distorting it in accordance with the author's sympathies. Although this information often reflects the reaction of public opinion (or a part of it) to fiscal policy, it is littered with traps because it also expresses a given political position. We have descriptions of the measures taken by the Isaurian emperors written by monks who were sworn enemies of those rulers for reasons that were not primarily economic, but were bound up with the fundamentally theological and

¹ In the text that follows, and especially in discussing the agricultural economy and taxation to the time of the Komnenian reforms, I have made extensive use of N. Oikonomides, *Fiscalité et exemption fiscale à Byzance, IXe–XIe s.* (Athens, 1996).

cultural controversy over the icons. However, even these polemical texts often allow us to discern the rationale that lay behind the fiscal measures described. Things become more difficult when, in their attempt to make the situation comprehensible or couch it in the required rhetorical form, the authors resort to oversimplification or replace the technical terms with a classical vocabulary that may be ageless but is not notable for its clarity.

The normative sources are principally laws, decrees, and practical handbooks of fiscal practice. They are, of course, sources of the greatest importance as they are absolutely official and of a guaranteed technical nature, describing what has to be done. There is, however, the problem that we do not know for certain how many other laws and decrees there may have been that have not survived. There undoubtedly were such texts, now lost to us; all we can do is hope they were neither numerous nor important and that consequently our general picture does not change.

There is another question, too, one that is much more difficult to answer: how far were the provisions of these regulatory texts actually implemented? Our uncertainty stems from the Byzantine attachment to tradition—an attitude that allows the *Basilics* of the tenth century to reproduce verbatim sections of the legislation of Justinian, using sixth-century terminology that bore no relation to the situation four hundred years later. Even so, the laws continued (with the aid of commentaries) to be implemented in the later era without regard for their anachronistic terminology. In any case, the laws that are of interest to us for the public economy are largely imperial ordinances, that is, new laws that were instituted for the purpose of being implemented.

Naturally enough, the administrative decrees were of a more directly practical nature. This is particularly true of the *Book of the Eparch*, which consists in effect of the regulations governing the operation, in the early tenth century, of the office of the *symponos*, who supervised the tradespeople of Constantinople on behalf of the eparch of the city. The description focuses chiefly on the regulatory role of the *symponos*, and for this reason the *Book of the Eparch* is of limited significance for the public economy per se.

By way of contrast, material of the greatest importance is to be found in the tax-accounting texts that have survived (most of them from the middle Byzantine period), which deal exclusively with the taxation of land and the peasants. The seven most central texts of this nature known to us are as follows. The first, a text in codex Parisinus supplementus graecus 676 (14th century), deals with weights and measures and contains some paragraphs of clear instructions for calculating land tax, personal tax, and land rent.² The information contained in this text will be of use to us as a basis for our calculations concerning the middle Byzantine period. Internal evidence demonstrates that this text must date from the tenth century. It seems to have been updated in the eleventh century, when at least two passages were added; they concern the reform of the system of weights and measures—with implications for taxation—intro-

² Recent editions: E. Schilbach, *Byzantinische metrologische Quellen* (Thessalonike, 1982), 59–60, and in particular *Géométries du fisc byzantin*, ed. J. Lefort et al. (Paris, 1991), 62.

duced by Emperor Michael (probably Michael IV, 1034–41),³ by which the length of the *orgyia* (fathom) used to measure land was increased by one *anticheir* (= $\frac{1}{3}$ of a *spithame*), thus correspondingly reducing the tax obligations of the emperor's subjects.

The second text is the regulatory note from Patmos, copied from a *praktikon* drawn up by Adam and recording a donation to Andronikos Doukas. It dates from 1073.⁴ Although the document refers to a specific donation, this paragraph is of a generally regulatory nature and agrees with the contents of the metrological text in the Paris codex.

The third text is the *Palaia Logarike*, published on the basis of codex Parisinus gr. 1670, which was written in 1182/83 (or shortly afterwards). This is a brief treatise on public accounting whose purpose is to explain how to calculate the *charagma*—in other words, how that basic land tax, with its traditional increments, was to be collected in gold coins or in coins of smaller value.⁵ Codex 1670 preserves a uniform work written by a *notarios* with access to the fiscal records shortly after the tax reforms of Alexios I Komnenos (begun in 1106 and completed in 1109/10). The first part is the *Palaia Logarike*, which describes what was done before Alexios Komnenos, and the second is the *Nea Logarike*, which describes the new tax system introduced by the emperor (see below). According to its title, the *Palaia Logarike* is attributed to “Caesar Augustus,” though in fact it refers to more recent times, close to those of the *notarios* who composed it early in the twelfth century in order to help the civil servants who would have to implement the new *Logarike* to understand fiscal documents issued before the reforms. The text refers to Leo III the Isaurian (717–741) as an emperor of the distant past; it is familiar with the fiscal system of the ninth century and with the names of taxes that first appear early in the tenth century, but also contains details that reveal familiarity with the procedure for the collection of certain secondary taxes in the last decade of the eleventh century. The latest updating that can be placed chronologically puts its contents after 1095.

The fourth text, the *Nea Logarike*, published after the *Palaia* and constituting the second part of the same treatise,⁶ contains a detailed description of the problems created for the collection of taxes by the instability and imbalance of the currency that resulted from the monetary crisis of the eleventh century and from the measures taken to rectify that situation, culminating in the final settlement of June 1109. The subject is the same as that of the *Palaia Logarike*: how to collect the tax and its adjuncts. The *Nea Logarike* consists of official, dated documents, and consequently no problem of dating its contents arises.

³ See *Géométries*, 48.

⁴ For a recent edition, see *Ἐγγραφα Πάτμου*, vol. 1, *Αὐτοκρατορικά*, ed. E. Vranousi; vol. 2, *Δημοσίων Λειτουργῶν*, ed. M. Nystazopoulou-Pelekidī (Athens, 1980), 2: no. 50, lines 312–17.

⁵ For a recent edition, see Zepos, *Jus*, 1:326–33. For comments, see N. Svoronos, *Recherches sur le cadastre byzantin et la fiscalité aux XIe et XIIe siècles* (Athens–Paris, 1959); M. Hendy, *Coinage and Money in the Byzantine Empire, 1081–1261* (Washington, D.C., 1969), 50–64; C. Morisson, “La logarikè: Réforme monétaire et réforme fiscale sous Alexis Ier Comnène,” *TM* 7 (1979): 419–64.

⁶ Zepos, *Jus*, 1:334–40; cf. the references in note 5 above.

The fifth text is the summary treatise on public finance contained in Greek codex 173 (12th century) in the library of San Marco.⁷ This is the most systematic text we possess. It begins with texts concerning weights and measures and continues with definitions of land and the “regime” under which it may be held, of tax relief and its abolition, of the techniques of composing fiscal documents, and on the calculation of the land tax—more specifically, of the methods of *epibole* and *hikanosis*, discussed below. The text seems to have been compiled by a civil servant who had access to the fiscal archives. The treatise in the San Marco codex has been dated to the tenth century (G. Ostrogorsky) and to between 912 and 1139 (F. Dölger). Since this text, too, appears to be aware of the changes in the manner of collection of the *synetheia* and the *elatikon*, I believe that it ought to be dated after 1095 and before the date at which the San Marco manuscript was copied, that is, the first half of the twelfth century.

The sixth text is the treatise on public finance in codex 121 of the monastery of St. Nikanor at Zaborda (a miscellaneous codex of the 13th century).⁸ The text has survived in truncated form and seems to have been written as an aid to the teaching of taxation practice, which explains why it is in question-and-answer form. It consists primarily of definitions concerning the exploitation of land and its taxation. It seems to me that the leaves on which this text is written clearly date from after the eleventh century (the period proposed by its editor). I would place them in the twelfth century, or perhaps even in the early thirteenth century. As for the text itself, we can see that it is familiar with the changes in the collection of secondary taxes that came about after 1095; that it seems to be describing a situation subsequent to the reforms of Alexios Komnenos (1109/10); and that it refers to the *pronoiatika*, indicating familiarity with the institution of *pronoia*, which was introduced in the twelfth century. Given also the date of the manuscript, we can conclude that the text must date from the twelfth century.

Finally, the seventh text, known as *Apokope psomion*, has survived in codex Vaticanus palatinus 367 (14th century, together with texts about Cyprus). It was published by F. Uspenskii and S. Lambros,⁹ and there are commentaries by F. Dölger¹⁰ and N. Svoronos.¹¹ According to Svoronos, this brief text—which is of no metrological interest but states only the extent to which land should be taxed according to its quality (τὰ δημόσια τῆς γῆς ὑπάρχουσιν οὕτως)—should be dated to 1232.

How reliable are these texts? In my opinion, they are highly, if not completely, trustworthy. In the few surviving texts that deal with land that did not receive special treat-

⁷ For a recent edition, see F. Dölger, *Beiträge zur Geschichte der byzantinischen Finanzverwaltung besonders des 10. und 11. Jahrhunderts* (Munich, 1927), 113–23.

⁸ Published in J. Karagiannopoulos, “Fragmente aus dem Vademecum eines byzantinischen Finanzbeamten,” in *Polychronion: Festschrift Franz Dölger zum 75. Geburtstag*, ed. P. Wirth (Heidelberg, 1966), 318–34.

⁹ F. I. Uspenskii, “Vizantiiskie Zemlemery,” in *Trudy VI arkheologicheskogo s’ezda v Odesse, 1884* (Odessa, 1888), 306; Sp. Lambros, in *Néos Ἑλλ.* 15 (1921): 345–47.

¹⁰ Dölger, *Finanzverwaltung*, 56.

¹¹ Svoronos, *Cadastr*, 125. Cf. A. E. Laiou, “The Agrarian Economy, Thirteenth–Fifteenth Centuries,” *EHB* 329–32.

ment and did not fall within any category or chronological period other than that to which each text refers, we seem to see them being implemented. Of course, the cases in which the instructions of the regulatory texts can be proved to have been followed are few in number, and there were cases of landowners with extensive privileges (such as that of the Great Lavra on Mount Athos) in which the rules were not fully applied.

It has to be added, in conclusion, that the administration of Byzantium, though complex, was always well organized and efficient, and its purpose was to ensure the control of the emperor over every aspect of life. One cannot see why this administration should not have been in a position to implement the rules that the state laid down for the collection of taxes, especially since the state was both flexible and realistic where this matter was concerned.

The Role of Money in the State Economy

The Byzantine state held a monopoly on the issuing of coinage and used it at will for the state economy.¹² Of course, there were also changing needs for cash, and the state's room for maneuver was constrained by the finite quantity of precious metals available. As a result, the state had to display flexibility and adaptability.

It has to be stressed, on the other hand, that monetization of the state economy does not mean monetization, to the same or a comparable degree, of the economy as a whole. The state was able to pay salaries and collect taxes in money without the use of that money becoming general (or rather, before it did so). The money in which to pay taxes thus became yet another scarce (and probably expensive) commodity. The reverse is also possible: that is, that the degree of monetization of the functions of state diminished despite the very widespread use of money in exchanges. This can be seen to have happened after the eleventh century, in the economy of the Komnenian and Palaiologan emperors. Everything would, of course, depend on the extent to which the state intervened in the economy.

In terms of its revenue, the state was interested first and foremost in collecting money, but it also received contributions in kind or in the form of services. All three modes of taxation had been known since antiquity, but the degree to which they were used differed substantially from the one era to the other. The general picture of the state economy changes in accordance with the mode of taxation on which emphasis was placed at any given time. The use of all three modes in parallel provided the system with the flexibility it needed in view of its finite boundaries, since the quantity of coinage it possessed was effectively limited by the precious metals available.

Byzantium survived the crisis of the third century, which had virtually eliminated the use of what was now a worthless coinage and had caused the state economy to be based on the system of the *annona*, paid in kind. Monetary circulation and use increased during the fourth century and the centuries that followed; by the second half of the eighth century, as we shall see, the land tax was once more collected in gold

¹² Cf. C. Morrisson, "Byzantine Money: Its Production and Circulation," *EHb* 911ff.



1. St. Gregory the Theologian and Julian the Exisotes. Mount Athos, Panteleimon monastery, cod. 6, fol. 77v (12th century) (after Οἱ Θεσαυροὶ τοῦ Ἁγίου Ὄρους. Εἰκονογραφημένα χειρόγραφα, vol. 2 [Athens, 1975], pl. 304)

coin, although the use of copper coin, the main tool for everyday transactions, had not extended to the entire empire at that time. Clearly, the monetization of the economy began with the activities of the state, and its primary purpose was to serve the needs of the state.

The state economy appears to have been largely monetized between the ninth and eleventh centuries and to have been based on the interaction between taxes and salaries. Taxes were paid in coin—gold, for preference (*charagma*)—and the state collected or spent in kind or in the form of services only as a supplement, to allow corrective action to be taken if the system became rigid. The significance of transactions in kind or services grew during the eleventh century. After the time of the Komnenian emperors, concessions of privileges played an important part in the state economy. In this way, the economy became less monetized, but never lost its monetary character entirely.

The main source of revenue for the state was the tax on land and farmers. Its principal expense was the cost of running the administration and the army. Those who served the state were remunerated in three main ways, which called for cash to be used in different manners, at least where the state was concerned. The *roga* (salary) was usually paid on an annual basis and always in cash; payments in gold coin were particularly frequent. The *roga* was the state's principal way of putting cash into circulation, before attempting to collect it once more as taxation. It was often supplemented by disbursements in kind (usually food, or, in the case of senior officials, valuable silk cloth). By comparison with the cash payments, these supplementary disbursements in kind were of little significance. A second form of remuneration, privileges, usually took the form of partial or complete exemption from tax on the beneficiary's land or of concession to him of the right to collect some or all of the obligations that one or more third parties might have toward the state. Here the use of cash was not essential, but the inflow of cash to the state was reduced. Finally, payment of the employee could be made by the citizens who used his services. The state intervened in this economic procedure only to regulate it, determining how it ought to take place and preventing excesses. The use of cash was not essential, but it certainly played an important part, especially in the urban centers.

When speaking of the monetization of the state economy, we have, of course, to bear in mind the differences that undoubtedly occurred from one area to another, and it is essential to remember the special importance of Constantinople and its environs for the Byzantine economy, at least to the twelfth century. In the capital, the prevailing economic processes were undoubtedly more advanced than in any other part of the empire.

It can thus be seen that the state's revenue and expenditure took a number of forms, all of which coexisted from the beginning of Byzantine history and throughout it. The percentage of the state economy to which each of these forms applied changed over time, and the picture of the public economy changed substantially, too.

If we look at the Byzantine state economy from a distance and describe it in a highly schematic manner, we can discern two major periods, the first of which begins around

650 and the second around 1100. The first period might be described as that of the command economy, in which the state exerted close control and functioned as a kind of pump, distributing and collecting money on the salary/tax system. The second period was closer to the free economy and was notable for its greater decentralization and for the significance in its functioning of the privileged treatment of individuals.

The State Economy in the Dark Ages (7th–9th Centuries)

For the first period, from the mid-seventh to the mid-ninth century, we have no archival material whatsoever and very few narrative sources. It is thus extremely difficult to monitor the course of the state economy in any detail. However, we can be sure that the principal characteristics of the fiscal organization that we know to have applied in the subsequent period must have made their appearance during the dark ages.

The State and Peasants

The collapse of the ancient system of cities, which coincided chronologically with the large-scale invasions of the ancient world, contributed to the intensive ruralization of the empire and, of course, of its public economy, which for quite some time continued, naturally enough, to function in accordance with the traditions of late antiquity. Only a small portion of the economy was monetized, and the basic land tax continued to be the *annona*, which was collected in kind. In order to determine the tax owed by each individual, the state used the system of indiction (*epinemesis*): the central administration fixed the total sum it expected to collect in the following year, and this was then distributed among the various administrative subdivisions of the empire—large and small—so as to produce the sum in tax expected from each taxpayer and calculated on the basis of units such as the *iugum* and the *caput*.¹³ The last mention of distributive taxation is in 710.¹⁴ After that time, a trace of it lived on in the principle of tax solidarity within the communities of small farmers, under which the peasants were obliged to contribute to the payment of tax demands that other members of the community were unable to meet (because they were absent, for instance, or were in grave financial trouble). The purpose of this principle, as it had been of the system of distributive taxation, was to ensure that the state received in full all the revenue it expected to collect from the given tax unit.

This system, which was unfair, onerous, and often uneconomical (since it was difficult to revise and consequently often failed to tax new commodities), was gradually replaced by another under which the tax was determined by the value of the commo-

¹³ For the early Byzantine tax system, see A. H. M. Jones, *The Later Roman Empire* (Oxford, 1964), 1:119–20, 206–7, 235–37, 284, 295, 444–69; J. Karagiannopoulos, *Das Finanzwesen des frühbyzantinischen Staates* (Munich, 1958); W. Goffart, *Caput and Colonate: Towards a History of Late Roman Taxation* (Toronto, 1974); P. Lemerle, *The Agrarian History of Byzantium from the Origins to the Twelfth Century* (Galway, 1979), 1–26. See also J. Durliat, *Les rentiers d'impôt* (Vienna, 1993).

¹⁴ Theophanes, *Chronographia*, ed. C. de Boor, 2 vols. (Leipzig, 1883–85), 1:377 (hereafter Theophanes). It was an extraordinary tax raised to fund a campaign.

ties taxed. The first step was to obtain statements from the taxpayers; of necessity, wide-ranging discretionary powers had to be granted to the tax collectors who were to implement the new method. Needless to say, special measures had to be used to ascertain the degree to which both sides were being honest. Something of this sort seems to lie behind the information that in ca. 694–695 the monk Theodotos, *logothete* of the *genikon* for Emperor Justinian II, tortured both the tax collectors and the rich men of Constantinople in an attempt to increase the state's revenue.¹⁵ The exertion of force in this area would be meaningful only if the state's income from taxation was not known in advance (as it had been under the distributive taxation system) but was ascertained by the statements either of the individuals who were to pay the tax or of the tax collectors who had received it.

Since the sum in tax was dependent on the value of the commodity being taxed, it seems likely that it was collected in cash. This is not to say that taxation in kind was impossible, because money could always be used as an accounting medium for calculating what would actually be paid in the form of fruits of the earth. Yet when we find that Leo III imposed an increment of one silver miliaresion per gold nomisma of tax¹⁶ (that is, an increase of 8.33%), we receive the impression that at least part of the tax must have been collected in money (presumably in accordance with the level of economic development). Later, however, the practice became more general. The chroniclers tell us that in 769 Constantine V, like "some new Midas," resolved to collect all the precious metals of the empire; the farmers, who did not possess gold coins, were ruined, for they were compelled to sell their harvest off cheaply so as to be able to pay their taxes, while in the cities goods were plentiful and cheap.¹⁷ It seems clear that Constantine had, for the first time, required that taxes be paid by all in gold coinage. This first attempt to bring about the complete monetization of the state economy encountered problems, presumably because the mechanisms that would give taxpayers easy access to the necessary cash were not yet functioning properly. After that time, however, the land tax in Byzantium was always paid in gold coinage. Complete monetization of taxation seems to have been achieved as early as the late eighth century.

Land was the main source of wealth. The only way in which the collection of taxes could be organized satisfactorily was to create a land cadaster and conduct surveys of farmers. Both of these were time-consuming processes. The first references we find are to surveys of the farming population. In Italy, such surveys were carried out in the reigns of Emperors Constans II (died 648) and Leo III (died 741).¹⁸ Indeed, Leo ordered a census of all newborn boys, who would of course be the heads of families in the future and would thus be subject to the middle Byzantine *kapnikon* (see below,

¹⁵ *Nicephori Opuscula Historica*, ed. C. de Boor (Leipzig, 1886), 37, 39 (hereafter Nikephoros); Theophanes, 367, 369.

¹⁶ Theophanes, 412.

¹⁷ Theophanes, 446; Nikephoros, 76; Nikephoros, *Patriarch of Constantinople, Short History*, ed. C. Mango (Washington, D.C., 1990), 160; PG 100:513–16.

¹⁸ *Liber Pontificalis*, ed. L. Duchesne (Paris, 1955), 1:344; Theophanes, 410.

p. 997). The *kapnikon* was indeed collected many years before the reign of Empress Irene, who was deposed in 802.¹⁹ It would appear, then, that the tax was devised by the Isaurian emperors.

The compilation of a cadaster was, of course, a much more complex task. The Roman Empire had drawn up summary land registers, in which broad geographical areas were shown with an indication of the number of estates located in each. It is not certain whether Justinian attempted to compile a detailed land register. Even if such a fiscal instrument had been prepared, it would surely have been unable to survive the turmoil of the late sixth and seventh centuries. Nor would it appear that the land register was complete at the end of the reign of Irene (802), since Theodore of Stoudios refers to the continued use of an oath as a means of proving taxable assets. Nikephoros I, Irene's successor, ordered a general revision of the land register. After that time, and to the eleventh century, the Byzantine system of land taxation was based on a land register that was systematically updated, thus drastically reducing disputes over taxation between civil servants and taxpayers.²⁰

Ownership of land also became the basis for financing part of the individual's obligation of military service to the state. The service appears to have been an obligation in the nature of a tax; this becomes comprehensible in the light of what we know about the system of the *strateia* from the ninth to the eleventh century.²¹

In two texts from the mid-eighth century—a paragraph in the *Ecloga* of the Isaurians and a court decision attributed to Leo III or Constantine V—we find references to soldiers who were owners or joint owners of land, who bought and maintained their armament from the money produced by their land, and who contributed the salary (*roga*) they earned when on campaign to the family budget.²² In other words, these were soldiers from rural areas who relied on their landholdings to maintain themselves, presumably because their status as soldiers secured them certain privileges to which we have no testimony for the period in question but which are known to us in later times.

Soldiers who were simultaneously owners of land are also mentioned by Theophanes, in reference to the year 810.²³ Theodore of Stoudios wrote in 801 about the widows of soldiers who were obliged to pay “a wretched and inhuman demand” (ἐλεεινήν καὶ ἀπάνθρωπον ἐξαπαίτησιν) because of the death of their husbands—in other

¹⁹ Theophanes, 487; *Theophanes Continuatus*, ed. I. Bekker (Bonn, 1838), 54.

²⁰ *Theodori Studitae Epistulae*, ed. G. Fatouros, 2 vols. (Berlin, 1992), vol. 1, no. 7, lines 35–41 (hereafter Theodore of Stoudios); Theophanes, 486.

²¹ I have studied the texts that follow in “Middle Byzantine Provincial Recruits: Salary and Armament,” in *Gonimos: Neoplatonic and Byzantine Studies Presented to Leendert G. Westerink at 75*, ed. J. Duffy and J. Peradotto (Buffalo, N.Y., 1988), 121–36. For a different view of the matter, see J. Haldon, “Military Service, Military Lands and the Status of Soldiers: Current Problems and Interpretations,” *DOP* 47 (1993): 1–67.

²² *Ecloga*, ed. L. Burgmann (Frankfurt, 1983), 220–22; D. Simon, “Byzantinische Hausgemeinschaftsverträge,” in *Beiträge zur europäischen Rechtsgeschichte und zum geltenden Zivilrecht, Festgabe für Johannes Sontis*, ed. F. Baur, K. Larenz, and F. Wieacker (Munich, 1977), 94.

²³ Theophanes, 486.

words, they were compelled to buy out, in cash, from the state, the military service their husbands were no longer in a position to provide.²⁴ This procedure is also familiar to us from the *vita* of St. Euthymios the Younger, a soldier's son; when his mother was widowed, she had to put her son—still in boyhood—in the army to avoid paying the *strateia*, the payment in lieu of military service. Clearly, then, in such cases the obligation of military service was not attached to the person of the soldier but to his land, along with which it was inherited. Furthermore, the obligation could be replaced with a cash payment.

The obligation of military service can thus be seen as another form of taxation. This was certainly the attitude that prevailed in the early ninth century, and it must surely predate that time, though we do not know by how much. However, the view of military service as a tax is only comprehensible in a monetized economy—a condition that also explains why it was that Emperor Nikephoros I conceived the idea of the collective military obligation: he recruited soldiers from among the poor and then compelled their fellow villagers to contribute to the cost of equipping them (up to a sum of 18½ nomismata?). This contribution also served as a permanent counterbalance to any failure on their part to pay all the tax for which they were liable (and which can be presumed to have stemmed from the shortfall in crops caused by the fact that the poor were off on campaign).²⁵

State revenue from rural areas was supplemented by a wide range of other obligations on the peasants: they might be compelled to supply the state with labor services free of charge, to provide accommodation and supplies for civil servants and the military, to make contributions of products in kind or to sell them at a fixed price, and so on. Although only passing references are made during the Dark Ages to these supplementary obligations—familiar from antiquity—we are well acquainted with them during the period that follows, and so it can be assumed that they never ceased to be demanded; naturally enough, since they met permanent requirements of the state and could be provided by taxpayers without any particular difficulty. What was to be a significant change was the conversion of these obligations into cash payments (*adaeratio*); although we have no certain testimony, we can hypothesize that this must have begun to be applied along with the spread of monetization of the state economy.

The State and Exchange

Our knowledge of the economics of trade during the Dark Ages is rudimentary and based largely on hypotheses. The ruralization of the empire led to a reduction in trade and to introversion, with a tendency for the urban units, with the sole exception of Constantinople, to incline toward self-sufficiency. There was also a significant drop in international trade. However, it should be borne in mind here that we are not talking

²⁴ Theodore of Stoudios, ep. 7, lines 61–63.

²⁵ Theophanes, 486.

of a cessation of trade, merely of a reduction in its frequency and importance.²⁶ In any case, as we shall see, the state and its representatives continued without respite to demand their share of the trade economy, however much it may have diminished.

The state controlled commercial transactions through the *kommerkiarioi*, agents whose field of activity was trade.²⁷ In the sixth century, *kommerkiarioi* was the name given to the imperial employees who, at the Syrian border, bought on behalf of the Byzantine state the silk imported from the East.²⁸ Around 630, the term *kommerkiarios* was translated into the scholarly language as ὁ τῆς σηρικῆς ἄρχων ἐσθῆτος ("lord of the silk cloth").²⁹ The number of *kommerkiarioi* subsequently increased significantly, and they acquired a special type of lead seal showing the emperor, an indication that the seals were placed on commodities of particular value, such as silk. On the reverse of some of these seals is the imprint of the burlap from the sack containing the merchandise. Very few other officials used seals depicting the emperor at this time, only those who were responsible for the movement of particularly valuable goods (gold coins, purple dye, etc.). Constantinople, in particular, was the headquarters of the lords of the *blattion* (purple), of whom we have testimony until 785/86 and who were often also general *kommerkiarioi* and overseers of workshops. In this capacity, of course, they supervised the imperial workshops where purple cloth and leather were made. These state workshops seem to have been reorganized after a disastrous fire in 792.

The fact that *kommerkiarioi* were to be found throughout the empire may be connected with the efforts made to encourage the production of silk and is certainly bound up with sales and purchases of silk. On the other hand, it is clear that the *kommerkiarioi* dealt in goods other than silk; it is impossible to imagine that while sericulture was developing in Byzantium, at a time when the economy was only partly monetized, there could be entrepreneurs who dealt exclusively in silk.³⁰ And of course they would use a different seal of the common type for all their transactions and correspondence when valuable items were not involved.

²⁶ For exchange, see A. E. Laiou, "Exchange and Trade, Seventh–Twelfth Centuries," *EBH* 697–708.

²⁷ H. Antoniadis-Bibicou, *Recherches sur les douanes à Byzance: L'«octava», le «kommerkion» et les commerçaires* (Paris, 1963), has been supplemented by the publication of many more seals of *kommerkiarioi* by G. Zacos and A. Vegliery, *Byzantine Lead Seals* (Basel, 1972). A debate ensued, in connection with which I cite the main publications and which I have taken into consideration in the discussion that follows. N. Oikonomides, "Silk Trade and Production in Byzantium from the Sixth to the Ninth Century: The Seals of Kommerkiarioi," *DOP* 40 (1986): 33–53; A. Dunn, "The Kommerkiarios, the Apotheke, the Dromos, the Vardarios and the West," *BMGS* 17 (1993): 3–24; see also Laiou, "Exchange and Trade," 706, and note 31 below.

²⁸ As can clearly be seen in the novels concerning silk of the 6th century: *Imp. Iustiniani PP. a., Novellae . . .*, ed. C. E. Zachariae von Lingenthal (Leipzig, 1881), 2:293.

²⁹ B. Flusin, *Saint Anastase le Perse et l'histoire de la Palestine au début du VIIe siècle* (Paris, 1992), 1:72 n. 108.

³⁰ I find it hard to believe that the *kommerkiarioi* supplied weapons to Byzantine soldiers, as proposed by M. F. Hendy, *Studies in the Byzantine Monetary Economy c. 300–1453* (Cambridge, 1985), 624, 626–34, 654–62, followed by J. F. Haldon, *Byzantium in the Seventh Century: The Transformation of a Culture* (Cambridge, 1990). There is no support in the sources for such a hypothesis. See *Mercati e mercanti nell'alto medioevo: L'area euroasiatica e l'area mediterranea* (Spoleto, 1993), 640 n. 13.

Furthermore, each *kommerkiarios* seems to have been in charge of an establishment called an *apotheke* ("storehouse"); there was usually one of these in each province (or group of provinces) under his control. The word *apotheke* is thus an abstract term referring to an institution rather than a specific building and covering a broad geographical area (rather than being confined to cities, harbors, or roads). We can hypothesize that each administrative *apotheke* would have consisted of a number of storage buildings on which real trade—the *commercium* of the *kommerkiarios*—would have been based.

Although they acted on behalf of the emperor, the *kommerkarioi* were entrepreneurs. We find the same *kommerkiarios* simultaneously controlling two, three, or even seven *apothekai* that are not geographically compatible. This means that he cannot have been a civil servant; he was an entrepreneur who had won by auction the right to manage the provinces in question and was represented there by his own employees.

We often come across two or three *kommerkarioi* in partnership, using a joint seal and undertaking, as companies, the management of one or more *apothekai*, while in parallel certain members of the partnership are by themselves responsible for other *apothekai*. Some of these partnerships of *kommerkarioi* are notably stable, lasting for five years or more.

After 673/74, the seals of the *kommerkarioi* bear, apart from the portrait of the emperor, the indiction of the year for which they were issued. By introducing dating in this way, the state must have been attempting to exercise closer control over the activities of the *kommerkarioi*. In some years between 673/74 and 715, we find seals with two consecutive indictions, meaning that their owners had leased the *apotheke* for two consecutive years.

There seems to have been a strong connection between the *kommerkarioi* and state power. Some of them were extremely active during the reign of a particular emperor and ceased to operate after his fall. We have the example, indeed, of two partners, George *patrikios* and Theophylaktos, who were conspicuous for their activities in the first reign of Justinian II (685–695), then disappear, and make their appearance once more during his second reign (705–711). Another of the favorites of Justinian II was George *apo hypaton* (ex-consul), who received at least seven *apothekai* in 694/5 and at least four more in 695/6; however, he was deprived of these immediately after the fall of Justinian and they came into the direct management of the state (the seals bear the impersonal expression "of the imperial *kommerkia*" rather than the name of a *kommerkarios*). In 693/4 and especially in 694/5, this same George monopolized the sale of a large number of slaves of Slav origin in various provinces of Asia Minor.³¹

Kommerkarioi with the imperial portrait on their seals are found until the year 728/729. After 730/731, a radical change takes place: the seals of the *kommerkarioi* and *apothekai* of the provinces disappear and are replaced by seals with the impersonal inscription "of the imperial *kommerkia*" followed by the name of the province or city. It seems clear that the custom of leasing the *kommerkia* to private citizens had fallen into abeyance, and that they were being managed directly by the state. This change can be

³¹ See also S. Bendall, "Slaves or Soldiers?" *Νομισματικά Χρονικά* 8 (1989): 41–43.

ascribed, without doubt, to Leo III the Isaurian, who conducted a systematic campaign of restoring state control over activities that in the period of his predecessors had been largely controlled by private interests.³²

One general *kommerkiarios* remained after 730/31; he was based in Constantinople, since he was often also *archon tou blattiou*, “lord of the purple.” There were also general *kommerkiarioi* in certain cities: Mesembria (until the second half of the 8th century) and Thessalonike (after 712/13). Both these cities were important harbors and were close to the Bulgarian border, in locations convenient for the import-export trade. Luxury goods, especially purple-colored leather, formed an important part of this trade.³³

The latest surviving seal of imperial *kommerkia* to bear a depiction of the emperor and the indiction is dated 832/3. During the decade that followed, we find some seals with the indiction but without the imperial depictions. By this time, however, the *kommerkiarioi* have reappeared, as “imperial” *kommerkiarioi* (after 831/2): in other words, they were civil servants, with jurisdiction over one, two, or three themes but especially over harbor cities located on the seacoast and on rivers. It seems clear that the sphere of responsibility of the *kommerkia* and the *kommerkiarioi* had changed by this time.

In the meantime, we have the first appearance of a new form of state revenue, the *kommerkion*, which was undoubtedly connected with trade. In 785, the chronicler Theophanes records that Emperor Constantine VI exempted (ἐκούφισε) the church of St. John the Divine in Ephesos from the *kommerkion* on its fair, amounting to 100 litrai (7,200 nomismata) of gold.³⁴ Here the *kommerkion* is clearly a tax on the fair—that is, on the sales of merchandise that took place during it—which the state collected from the “owner” of the fair (the church), on whose ground the merchants gathered and to whom they paid the charges of all kinds required for participation in the fair. We do not know whether the sum mentioned by Theophanes was calculated by approximation on the transactions that actually took place or whether it was a lump-sum levy. Nor do we know to what percentage of the merchandise the *kommerkion* corresponded at that time. However, later sources tell us that the *kommerkion* was still levied on fairs and that it usually corresponded to 10% of the value of the transactions that took place.

All those sailing through the straits toward Constantinople, either from Abydos at the Dardanelles end or from Hieron on the Bosphoros, paid the λεγόμενα κομμέρκια, the “so-called *kommerkia*”; Empress Irene suspended collection of this levy, and it was restored by her successor. Early in the ninth century, Emperor Nikephoros imposed a compulsory loan on the shipowners of Constantinople, who were still subject to payment of the “usual *kommerkia*.”³⁵ In both these cases, the *kommerkion* was a duty on the circulation of commodities, and it clearly served as a continuation of the duty imposed by Justinian I in the sixth century when he set up the customs houses at Abydos and

³² *Ecloga*, 166.

³³ See N. Oikonomides, “Tribute or Trade? The Byzantine-Bulgarian Treaty of 716,” *Studia Slavico-byzantina et Medievalia Europensia* 1 (1988): 29–31.

³⁴ Theophanes, 1:469–70.

³⁵ *Ibid.*, 475, 487.

Hieron to control the goods being imported into the economic region of Constantinople.³⁶

The *kommerkiarioi* were involved in the collection of tax even in earlier times. As far back as the seventh and eighth centuries, we find *kommerkiarioi* who were simultaneously *dioiketai* or *genikoi logothetai*, that is, tax collectors. There are also seals belonging to imperial *kommerkia* whose geographical jurisdiction was defined by the boundaries of a *dioikesis*, which was a tax unit. These combinations of titles allow us to hypothesize that at a relatively early date the *kommerkiarioi* were involved in the collection of taxes on behalf of the state.

In the late Roman period, the tax on the circulation and sale of goods was called the *octava* and it corresponded to 12.5% of their value. We can assume that this tax, or one similar to it, continued to be collected through the Dark Ages, the only difference being that now the whole process passed through the hands of the *kommerkiarioi*, those to whom the commercial activities of one or more provinces were farmed out for one or two years. The process was “privatized,” and new methods and terms were introduced *ipso facto*.

What, along general lines, was the role of the state in trade at a time of economic shrinkage whose features included increased self-sufficiency on the local level? There is a scenario that we can propose. In the seventh century, when the economy of the cities entered a period of decay, the *kommerkiarioi*—traditionally dealers in silk—undertook to represent the interests of the state in the provinces in which they already held a monopoly on the production and marketing of silk and in which they also engaged in other commercial activities. They managed the *apotheke* and its subdivisions, trading directly and also supervising (and taxing) other merchants (to whom they may have conceded certain rights). This was undoubtedly a profitable undertaking, since it involved at least one entire province, and it was leased by the state to the highest bidder for a set period of time. After the auction, the enterprise was taken over by private citizens of great wealth, who sometimes formed partnerships for the purpose; competition was fierce, and political support played an important part in securing the auction and concentrating a number of provinces in the hands of a single individual or partnership. In other words, there was a tendency for favored citizens to monopolize the enterprises. The system functioned primarily in Asia Minor.

Under the Isaurian emperors, the picture changed. Private *kommerkiarioi* all but disappeared and were replaced by the civil servants of the imperial *kommerkia*, whose activities, we can assume, were similar to those of their predecessors, which is why they continued to imprint a depiction of the emperor and the date on their seals: so as to facilitate control over the silk trade. The imperial *kommerkia* drew back from the zone in which war was being waged against the Arabs, congregating in western Asia Minor

³⁶ For the Constantinople area in the middle Byzantine period and its unique fiscal features, see N. Oikonomides, “The Economic Region of Constantinople: From Directed Economy to Free Economy, and the Role of the Italians,” in *Europa medievale e mondo bizantino*, ed. G. Arnaldi and G. Cavallo (Rome, 1995).

and the Balkans. After 730/31, the jurisdiction of each royal *kommerkion* was defined either by the name of a province or by the name of a theme, the new military subdivision of the empire which included a number of provinces. Indeed, we have an example of a seal belonging to a *strategos* of Mesopotamia that probably dates from 825/6 and bears a depiction of the emperor, presumably because the *strategos* was exercising powers similar to those of the *kommerkiarios* at the time.³⁷ As we shall see below, in the tenth century the *strategos* of Mesopotamia received the *kommerkion* of his theme rather than a salary.

Once the state had begun to intervene in trade through civil servants and not by means of entrepreneurs, trade per se naturally passed into the hands of private individuals. The civil servants confined themselves primarily to collecting the tax levied by the state on trade, and they used seals far less magnificent than those of the preceding period. This tax was called the *kommerkion* after the office that collected it, and it took the form of either a duty on movements of goods or a tax on their sale (though there was no real difference between the two, given that the *kommerkion* was refunded on goods that were reexported, unsold, through Abydos). This process was certainly complete by the second quarter of the ninth century.³⁸

Administrative Structures

The Dark Ages also saw the creation, little by little, of the administrative structures of the middle Byzantine economic and fiscal services. The main administrative change was the splitting of the early Byzantine *praefectura praetorio per Orientem* and its replacement by the *logothesia* (secretariats) in the central administration; the *comitiva sacrarum largitionum* and the *res privata*, too, gave way to their medieval equivalents. Apart from the changes in nomenclature, these successive administrative reforms led to the subdivision of the services and the creation of a whole series of public finance offices, which were directly dependent on the emperor, originated partly in his economic services, and monitored one another. The new administrative arrangement is known to us from sources of the ninth century and will be described below; for the present, I shall try to present some of the stages in its evolution.³⁹

The most widespread transformation seems to have come about as early as the time of Herakleios or his immediate successors. There is testimony from the sixth century as to the existence of the *sakellarios*, the treasurer in charge of the royal money, who may have been connected with the personal services of the emperor. He gained in importance during the seventh century, controlling payments and thus the mints (of Constantinople, Ravenna, and Carthage, in the 7th century). Over time, the office of the *sakellarios* became still more important; its occupant was detached from the treasury

³⁷ W. Brandes, "Überlegungen zur Vorgeschichte des Thema Mesopotamien," *BSI* 44.2 (1983): 171–77.

³⁸ Cf. Laiou, "Exchange and Trade," 705–9, 713–14.

³⁹ Based on Haldon, *Seventh Century*, 173ff. Cf. also F. Winkelmann, *Byzantinische Rang- und Ämterstruktur im 8. und 9. Jahrhundert* (Berlin, 1985).

and became a general comptroller of the finances of the empire. This process seems to have been completed by the eighth century, perhaps even earlier. The *sakelle*, the traditional state treasury, continued to function, under a *chartoularios* who was a subordinate of the *sakellarios*. Another *chartoularios* was in charge of the (state) *vestiarion*, a second treasury that seems to have had its origin in the services of the *sakellarios* and whose task it was to control the mint and all the items of value owned by the state. The *res privata* evolved into the *eidikon*, yet another treasury that was at the disposal of the emperor.

However, greater importance should be attached to the appearance of a senior official under the title of *logothetes*; this was the post that was to be characteristic of the state economy throughout the middle Byzantine period. This development took place in the seventh century.

The title of *logothetes* was an old one, and it was applied to the civil servant who collected taxes. In 626 we find the first mention of a *logothetes* (probably *tou stratiotikou*, "of the military") who was also a *patrikios*, that is, he belonged to the topmost level of the hierarchy. The first certain, dated mention of a "military" *logothetes* comes in 680; there are similar sure references to a "general" *logothetes* in 692 and to a *logothetes* of the *dromos* in 760,⁴⁰ but in all three cases it is clear from the context that the institution was a much older one. These men headed the three services that recorded persons liable to discharge obligations to the state and calculated the level of those obligations in terms of tax (the general *logothetes*), military service (the military *logothetes*), and the maintenance of the infrastructure necessary for the functioning of the posts (*logothetes* of the *dromos*). This administrative reform obviously reflects the change in the system of taxation that occurred at about the same time and is, of course, connected with the new mentality that led to the creation of the army of the themes.

We can be sure, needless to say, that the change in question was not fully synchronized and did not take place from one day to the next. Some of the general *logothetai* exercised their authority in specific provinces and combined their activities in that post with those of the *kommerkiarios*. However, the principal fiscal officials in the provinces were the *dioiketai* (commanders), of whose existence we know from numerous seals; they might have authority in a specific area or more generally "in the provinces." The reduction in their power that occurred can be attributed to the emergence of the institution of the themes. On the other hand, civil administration in the themes passed into the hands of the *anthypatoi* (whom I find it hard to identify with the *praefecti praetorio*) and the *eparchoi*, who dominated fiscal activities in the provinces during the eighth century and the first half of the ninth.

A final note must be made on the continuous presence of the *kourator*, who managed the royal assets after the late sixth century (when the first mention of the office is found) and who was later styled "great *kourator*." The assets concerned were estates scattered throughout the empire and subject to direct operation on behalf of the state.

⁴⁰ Mansi, II; Theophanes, 365; Nikephoros, *Short History*, 39.

An Overview

The general picture that I have been presenting seems to have been completed by around the year 800, when we have some information about the public economy thanks to the tax relief granted by Empress Irene (797–802);⁴¹ taxation was based on the value of the taxed goods and paid in gold (this applied also to the personal tax called the *kapnikon*). Movements of goods by land and sea were subject to various toll charges, the most important of which is traditionally held to be that levied on passage through the straits that led to Constantinople. Rent amounting to one-third of the product was charged on the use of state assets. Military service was regarded as a tax obligation and was inherited since it was charged on soldiers' land.

We have a greater volume of information about the ten "vexations" (κακώσεις) imposed by Irene's successor, Nikephoros I, "the former general *logothetes*" (802–811), in his attempt to revitalize the state economy.⁴² We are told that apart from cancelling some tax exemptions (such as the exemption of charitable institutions from the *kapnikon*), this emperor set up a special tax court in an attempt to demand that all citizens—and especially the wealthier citizens who evaded tax—pay the taxes that truly fell to their lot. The principle of *hikanosis* (i.e., of the sequestration from the owner of any land in excess of that corresponding to the tax he had paid) had by now been introduced and was yielding good results in conjunction with an increase in taxation. The compilation of a new land register provided an opportunity for the imposition of a special levy, the *chartiatika*, which soon became a permanent increment on tax under the name of *dikerton*. Treasure trove was, by tradition, taxed at 50%; cases of sudden enrichment and sales and purchases of slaves were also taxed. The small shipowners of the provinces were compelled to buy land in order to join the war navy, while the large shipowners of Constantinople were obliged to conclude an onerous compulsory loan, and thus intensify their activities and expand the role they played in the general economy of the empire.

The picture provided by the state economy in 800 is indicative of the end of one era and the beginning of the next. The process of evolution in the economic institutions—a process that began under Herakleios or even earlier—was complete. All the characteristics of the state economy of the middle Byzantine period, of which we know more because there is more source material, were now in place.

The Command Economy of the State (9th–11th Centuries)

During this period,⁴³ the state economy appears to have been almost entirely monetized, at least with regard to the basic taxes (land tax and personal tax) and the princi-

⁴¹ Known to us from Theophanes and Theodore of Stoudios, ep. 7.

⁴² Theophanes, 486, 487, 488, 489, 492. Cf. *Ioannis Zonarae Epitome historiarum*, ed. T. Büttner-Wobst (Bonn, 1897), 3.306–8 (hereafter Zonaras). The ten vexations of Nikephoros have been studied systematically by A. Christophilopoulou, Βυζαντινὴ Ἱστορία, vol. 2, 610–867 (Athens, 1981), 166–71.

⁴³ The account that follows is based on Oikonomides, *Fiscalité*. At many points I disagree with W. Treadgold, *The Byzantine State Finances in the Eighth and Ninth Centuries* (New York, 1982), which

pal remuneration paid by the state for the services it received (the *roga*). Evidence of the spreading use of money is provided by both the texts and the archaeological finds. No more turmoil was caused in the Byzantine state by the demand that tax be paid in gold. In Bulgaria, on the other hand, tax was paid in kind, and when Bulgaria and Serbia were conquered (1018) the tax system initially remained unchanged. Later, however, the revolt of Peter Deljan (1040) was provoked by the attempts of the Constantinopolitan government to collect the land tax in money, presumably because these newly acquired areas were on a different level of development from the older provinces of the empire.⁴⁴ One can hypothesize that similar phenomena would also have occurred in other areas around the distant edge of the empire.

Administrative Structures

The basic organizational structure of the fiscal services remained during this period in the form it had taken early in the ninth century, though of course it evolved. The various offices were staffed with employees who wrote out documents and kept accounting books. They retained their late Roman names: *notarioi/notarii* (some were known as “imperial *notarioi*”), *chartoularioi/chartularii*, and *kankellarioi/cancellarii*. Some of these officials bought their posts for large sums of money,⁴⁵ which means that they must have had substantial incomes deriving directly from the citizens. There are also references to the messengers (*mandatores*) of the services, at whose head was a *protomandator*. A special position was occupied by the *episkeptitai*, who managed estates (*episkepseis*), the income on which had been conceded to one department of state or another.

During the ninth and tenth centuries, the administration of the public economy was concentrated in Constantinople, in the various offices that will be listed below. Civil servants usually visited the provinces as and when necessary, or at regular intervals; the regular land survey appears to have been conducted every thirty years. The *chartoularioi* of the *genikon*, who updated the land register of the theme (also called *chartoularioi* of the *arklai*), were based permanently in the themes, as were the *epoptai* who inspected the land register, the *dioiketai* who collected the land tax, and the *kommerkarioi* who collected indirect taxation. Also resident in the provinces were the *protonotarioi* of the themes (subject to the *sakelle* treasury), who also acted as civil governors and ensured that special taxes were imposed and collected. Of the military secretariat, only the *chartoularioi* of the themes were based permanently in the provinces, holding the ledgers of soldiers' land. These functions, which to a greater or lesser extent brought the civil servants into direct contact with taxpayers and with the process of collecting taxes, were sources of income that could often be substantial, since apart from the profits to be made from farming out part of the tax collection there were various “gifts”—*kaniskia*, *synetheiai*, and *prosodia*—to be received. For this reason, positions in

has also been criticized by R.-J. Lilie, “Die byzantinischen Staatsfinanzen im 8./9. Jahrhundert,” *BSI* 48 (1987): 49–55.

⁴⁴ *Ioannis Skylitzae Synopsis historiarum*, ed. I. Thurn (Berlin–New York, 1973), 412 (hereafter Skylitzes).

⁴⁵ See below, 1009ff.

the financial administration of the provinces were much sought after among the staff of the central administration, as can be seen quite clearly from the lead seals.

The managers of the various estates and other assets belonging to the state and the crown (e.g., *kouratoria*, *episkepseis*) were also based in the provinces. Here, too, we can assume that whenever such (profitable) enterprises were undertaken by highly placed officials, on-the-spot management must have passed through the hands of trusted subordinates serving as intermediaries. An outline of the administration of the financial services can be drawn up on the basis of the largest offices in the capital.⁴⁶

The *sakellarios* was the supervisor of all the financial services, in each of which he was represented by a *notarios*. As time passed, however—and possibly after the appointment to the post of Michael of Neokaisareia (shortly after 1071)—the office of the *sakellarios* came to have jurisdiction only over ships and landing stages, and it is mentioned less and less frequently down to the end of the twelfth century.

The office of the general *logothetes*, with its *chartoularioi*, updated the land register (the *kodikēs tou genikou*)—which was revised by the *epoptai*—and set the land tax, which was collected by the *dioiketai*. Its jurisdiction also included the *kommerkiarioi*, who collected the *kommerkion*, and employees such as the *oikistikos* and the *epi tes kouratoreias*, whose object of work was the estates that enjoyed privileges or had come into the possession of the state. The *kouratoreia* received estates taken from the ownership of private citizens, some of which were later sold on behalf of the state to persons who needed to create an economic base in the agricultural sector.⁴⁷ It is not impossible that there was a separate department that assembled grain from all over the empire.⁴⁸ In the eleventh century, however, the office of the *logothetes tou genikou* went into decline because he could no longer control the lands in state ownership, which had grown constantly. The *oikistikos* became an independent department.

Furthermore, the *sekretōn ton oikeiakōn* had now (before 1032) made its appearance. In 972/973, this had been a special treasury controlled by the general *logothetes*, but now it acquired control over all state land, on which it collected the land tax and the farmers' tax. In addition, it controlled all special taxation and the compulsory labor that citizens provided for the empire. The setting up of this new department coincided with a deliberate policy on the part of Basil II and his successors to bring more land into state ownership and to increase the true burden of secondary taxation. By the twelfth century, the *sekretōn ton oikeiakōn* was the department principally responsible for collecting the revenues of the state in the provinces.

The *logothetes* of the *stratiotikon* (military) dealt with recruitment to the army and the

⁴⁶ Our information in connection with middle Byzantine public finance services has been assembled in the following publications: N. Oikonomides, *Les listes de préséance byzantines des IX^e et X^e siècles* (Paris, 1972), 312–19; idem, “L'évolution de l'organisation administrative de l'empire byzantin au XI^e siècle (1025–1118),” *TM* 6 (1976): 135–41; idem, *Fiscalité*, 273ff; V. Laurent, *Le corpus des sceaux de l'empire byzantin* vol. 2 (Paris, 1981), with a note on each occupation referred to on seals. The footnotes that follow contain only some references to sources and supplementary bibliography.

⁴⁷ Theophanes, 487.

⁴⁸ See J. Haldon, “Comes Horreorum—Komes tes Lamias,” *BMGS* 10 (1986): 203–9.

funding of the armed forces, and he held the military registers recording the estates on which *strateia* was payable. The *chartoularioi* of the *stratitikon* represented their department in each army corps. However, when the system of recruitment changed, the department went into decline and effectively disappeared after 1088.⁴⁹

The *logothetes* of the *dromos* controlled, through his *chartoularioi*, the contributions made by the special category of citizens who maintained the road network and provided personal labor to support the state postal service. His office also had responsibilities in connection with foreign envoys that exceeded mere financial obligations, and it was this second orientation that enabled the department to survive even though its fiscal activities diminished to the vanishing point during the eleventh century.

Apart from the departments that collected state revenue, there were also a number of other treasuries of a more general or specific nature. The *sakelle* (or *sakellion*) was the state treasury par excellence. It was originally controlled by the *sakellarios*, though it made its appearance as an independent department in the ninth century, under the administration of the *chartoularios* of the *sakellion* (the *epi tou sakelliou*). It had special employees who weighed (*zygostates*) or counted (*metretes*) money, depending on the level of the sum. In the provinces, the *sakelle* was represented by the *protonotarioi* of the themes—the civil administrators of those districts—who also imposed special levies on the areas under their control when necessary. Most state revenue found its way into the *sakelle*, and most disbursements were made out of it. It also sustained certain charitable works (guesthouses, institutions for the aged). When the state economy became less monetized, the *sakelle* declined, disappearing after 1145.

The *eidikon* (or *idikon*, opinions differ) was yet another separate treasury, which paid the *rogai* of the senate (and, perhaps, also collected the “prices of the titles”; see below). It stored up the “forbidden” (*kekolymena*) products of the imperial workshops, the circulation of which was under very close supervision (silk cloth and garments of the highest quality, silk strings for bows), and other special items (such as sets of Arab dress for use by spies). The *archontes* or *meizoteroi* of the workshops (*ergodosia*) such as the *archon* of the *armamenton* (of armaments) and the *archon* of the *chrysocheion* (goldsmith’s shop)—that is, the persons in charge of the imperial workshops—depended directly on the *eidikon*. The crisis of the eleventh century, which led to the change in the composition of the senate and to the bankruptcy of the investment/*roga* system where official titles were concerned, brought about the decline of the *eidikon*, which is mentioned for the last time in 1088.

The (state) *vestiarion*—not to be confused with the emperor’s own personal *vestiarion*—was the fund that usually collected fines, probably controlled the mint of Constantinople, and stored up such items as were necessary to arm the fleet (one of its employees was called the *exartistes*). In the twelfth century, the *vestiarion* became the principal state treasury.

In parallel, another treasury was evolving out of the *vestiarion* of the emperor’s

⁴⁹ The title of military *logothetes* was revived in the 14th century, but it was by then a purely honorary post.

household; this was the *phylax*, whose name came from the building in the great palace in which it was housed and which had originally been the emperor's personal treasury, accompanying him (in the late 10th century) on campaign. Little by little, however, it developed into a proper *sekretion*, that is, a department of the civil service.

Side by side with the financial services properly speaking, we must note the existence of a number of departments that managed the assets of the state, including the *logothetes ton agelon* ("of the herds"), who was in charge of the two huge horse-breeding estates in the provinces of Asia and Phrygia, from which came high-quality horses and mules for the army. Most of these departments, however, were involved in the management of the imperial property. The (great) *kourator*, to whom there are references from the sixth century to 1012, was largely responsible for managing these assets, including estates, *episkepseis*, guesthouses (such as those of Sangarios, Pylae, and Nikomedeia), and the palaces outside Constantinople, which depended on these lands for their maintenance. A new and similar department, called the *kouratorikion* of Mangana (in Constantinople), was founded early in the ninth century and reorganized by Basil I (867–886). Last among the major services of this kind was the orphanage of St. Paul, a private institution founded in the sixth century, which came into state ownership and was reorganized in 1032 and then again under Alexios I Komnenos.

The conquests of the tenth century significantly increased the number of *kouratoreia* and *episkepseis* on the periphery of the empire. The great *kouratorikion* was abolished and replaced by an inspector, the *ephoros* of the imperial *kouratoreia*. Some of the departments in Constantinople were amalgamated into the Mangana department, and a new *kouratorikion*, of Eleutheriou and Mangana, was set up (possibly under Constantine Monomachos, 1042–55). It is known to have survived until 1088. In other words, we have widespread decentralization of the financial departments, over which the state exercised merely a certain control.

The tenth, and especially the eleventh, centuries saw the development of the "charitable houses" (*euageis oikoi*; see p. 1007), institutions that were originally privately funded. These acquired considerable revenue and were used to finance the upper reaches of the aristocracy on behalf of the state, which is why they were also called "charitable offices" (*sekreta*). Here there was decentralization right from the start, and there was also an attempt to exercise some state control, in the person of the *oikonomos* of the charitable houses, to whom there are references from early in the eleventh century to 1088.

In the eleventh century, we gain the impression that the state was particularly interested in managerial control of its financial services. A number of new employees, "accountants" (*logariastai*), made their appearance in 1012 in the departments of Constantinople and the provinces, on the estates of the emperor and private citizens alike. It was not until the last decade of the eleventh century, however, that a central auditing service was set up. Alexios Komnenos founded two large accounting departments: the *megas logariastes ton sekreton* ("grand accountant of the *sekreta*"), who first appears in 1094 and audited all the fiscal services (thus replacing the *sakellarios*, presumably using more advanced methods); and the *megas logariastes* of the *euage sekreta* ("grand accountant of the charitable *sekreta*"), who audited the institutions connected with the imperial prop-

erty and seems to have replaced the *kourator* of the Mangana and, in particular, the *oikonomos* of the *euageis oikoi*.

In the new state economy of the Komnenoi, discussed below, the distinction between the revenue of state and the revenue of the crown was, of course, retained. However, the departments were drastically simplified and decentralized, thus bringing to its culmination a process that had been going on throughout the eleventh century. I believe that this simplification and decentralization can be explained by the change in the state economy: the state, which had previously been the motive power and had imposed the circulation of money, now partially withdrew from this circulation and turned to the granting of privileges. A significant portion of the state economy thus functioned in the form of entries on paper, without any real money changing hands.

The State and the Farmer

The principal source of revenue for the state was, beyond doubt, the agricultural economy, taxation of which was based, at least until the eleventh century, on the land register, updated every thirty years by the *anagrapheis* and by the *epoptai* at shorter intervals. The objective of the entire tax system was to guarantee that year by year the state revenue would regularly flow in.

Another of its objectives was to gather as many gold nomismata as possible and return them to the state treasury. Land tax, personal tax, and the increments on both were always paid in cash, in gold nomismata. When the total tax obligation included a fraction of a nomisma, the fraction could be paid in silver or copper coin; if the fraction was greater than $\frac{2}{3}$ of a nomisma, then an entire gold piece had to be paid and the taxpayer would receive change in coins of smaller denominations. This procedure for paying tax was called the *charagma*, and it allowed the state to maximize the number of gold nomismata that returned to its coffers.⁵⁰

Tax was the emperor's right, and it was collected on land belonging to private citizens and institutions. Its level depended on the fiscal value of the taxable assets, which in turn was determined by the surface area of the land involved and its quality: a modios of first-class land (irrigated fields) was assessed at one nomisma, a modios of second-class (arable) land was assessed at half a nomisma, and a modios of third-class land (pasture) was assessed at $\frac{1}{3}$ of a nomisma. These conventional rates seem to have been relatively close to the actual prices of land, which we know for the middle Byzantine period. It would appear that the value of vineyards (and thus of the tax on them) was set at three times that of first-class land.⁵¹

⁵⁰ Svoronos, *Cadastre*, 110ff.

⁵¹ J.-C. Cheynet, E. Malamut, and C. Morrisson, "Prix et salaires à Byzance, Xe–XVe siècle," in *Hommes et richesses dans l'Empire byzantin*, 2 vols. (Paris, 1989–91), 2:344ff. For the value of vineyards, cf. also C. Morrisson and J.-C. Cheynet, "Prices and Wages in the Byzantine World," *EHB* 832–33. An extremely high fiscal assessment—three times that for first-class land—is also given for a meadow yielding crops of hay, because this could produce large quantities of animal feed without requiring any labor other than harvesting from time to time and storage of the crop during the winter.

The tax corresponded to $\frac{1}{24}$ of the total value of the estate. In other words, one gold nomisma was charged for each 24 modioi of first-class land, for each 48 modioi of second-class land, and so on.⁵²

Of course, it has to be noted that this rate varied substantially from place to place and from time to time, as clearly reflected in the units of measurement used on each occasion. In measuring land in the fertile themes—that is, throughout the Balkans and in western and southern Asia Minor (Thrakesion, Kibyrrhaiotai)—the usual unit of measurement was the *schoinion* consisting of 10 orgyai (a unit of length corresponding to approximately 21.30 m); elsewhere in Asia Minor, the *schoinion* of 12 orgyai, amounting to 25.30 m, was employed. Furthermore, in the Balkan themes a discount of 10% on the results of measurement was granted even before the calculations of the surface began. Under this system, a hypothetical square with a true area of 45,369 m² would be reckoned as 50 modioi if it were fertile land, 40.5 modioi if it were in the Balkans, or 35 modioi if it were in the East. We also know that Emperor Michael IV (1034–41) introduced a slight increase in the length of the *schoinion* in order to reduce the burden on taxpayers. These differences were thus substantial and made a significant difference to the sum in tax payable on each estate. It is also important to note that geometry was subjugated to tax accounting.

When the tax accountants were dealing with an estate belonging to a single owner, the entry was a simple one. However, when they were faced with a village composed of numerous small landowners, each property was registered separately on a line (*stichos*) beginning with the name of the taxpayer and ending with the sum he owed in tax (the *akrostichon*). The sum of the *akrosticha* represented the “root” (*riza*) of the village, that is, the sum for whose payment the villagers were collectively responsible.

Down to the eleventh century, a number of increments had become attached to this basic tax, having been added at various points in the past. To begin with, the increments were levies to meet the expenses of the tax collectors, but little by little they became regular increments on the land tax itself. The Byzantines referred to them as *parakolouthemata* (“accretions” or *sequentiae*).

The earliest increment was the *dikeraton*, a charge of 2 keratia ($\frac{2}{24}$ of a nomisma) on each nomisma of tax (an increment of $\frac{1}{12}$ on the basic tax rate), which seems to have been introduced by Nikephoros I as a regular charge for *chartiatika*, in other words, to meet the cost of inventorying the assets. The next increment was the *hexafollon*, consisting of 6 folleis ($\frac{6}{288}$ of a nomisma) on each nomisma over a certain sum (an increment of $\frac{1}{48}$), which was probably first demanded by Leo VI. By the eleventh century, both these increments had been incorporated into the tax, and the tax collector would demand on his own account the *synetheia* ($\frac{1}{12}$ of a nomisma for each nomisma of tax, up to a maximum of 9 nomismata per taxpayer) and the *elatikon*, the fee of the armed men in his entourage, which varied from $\frac{1}{24}$ of a nomisma to one nomisma per tax-

⁵² The system and its individual features are described in detail in the metrological text of the Paris codex, *Géométries*, 62. The question has been studied by many scholars, including F. Dölger, G. Ostrogorsky, N. Svoronos, E. Schilbach, and G. Litavrin. Cf. J. Lefort, “The Rural Economy, Seventh–Twelfth Centuries,” *EHB* 299–302.

payer. In the late eleventh century, the *synetheia* and the *elatikon*, too, were incorporated into the tax. The total additional charge for the taxpayer was thus of the order of 24%. The sum of the land tax and the “accretions” was called the *arithmion*, and it had to be paid in cash.⁵³

Payment of the land tax had significant consequences in law. Only the owner of the land was liable to pay the tax on it. Given the manner in which the tax was calculated, the sum paid ought—theoretically—to have corresponded absolutely to the value of the land (i.e., to the assessment of its quantity and quality made for tax purposes). Payment of tax was, consequently, the best proof of ownership over all the land. If, on the other hand, it were to be proved that the tax paid by a landowner was less than the sum corresponding to the “value” of his land, the state regarded him as having encroached upon state land and thus confiscated the surplus part of the land. This process, known as *hikanosis*, was intended to allow control of the extent to which each landholding paid all the tax for which it was actually liable. It is first mentioned, I believe, very early in the ninth century, as one of the “vexations” of Nikephoros I,⁵⁴ and remained in force throughout the twelfth century, at least.

To the land tax was added the tax on cultivators and on the means of production at their disposal. The *kapnikon*, charged on each farmer’s household—whether he owned his own land or was a *paroikos*—amounted to 2 miliaresia for each household in the ninth century,⁵⁵ later rising to 3 miliaresia or to 6 for such households as possessed a donkey.⁵⁶ On the other hand, the *synone*, originally the obligation on the producer to sell his produce to the state at a fixed price, had by the ninth century been transformed into a lump-sum contribution in kind (6 modioi of wheat for each male),⁵⁷ and by the eleventh century it had evolved into a lump-sum cash payment by the more prosperous farmers—those who had one or perhaps two pairs of oxen with which to till the ground.⁵⁸ There is also a reference to the *synone* as a payment of one nomisma.⁵⁹

That was the history of personal taxation. In the tenth and eleventh centuries, however, farmers were taxed on the same principles as those applied to the land: each farmer was given a fiscal “value,” of a theoretical nature, needless to say. It was calculated that a *zeugaratos* (the owner of a pair of oxen) was worth 24 nomismata, a *boidatos* (who owned only one ox) was worth 12 nomismata, and an *aktemon* (who owned no oxen) was worth 6 nomismata. Consequently, as emerges unequivocally from a document of 1104, one *zeugaratos* was equal to two *boidatoi* and four *aktemones*.⁶⁰ Their personal tax thus amounted to $\frac{1}{24}$ of that value, standing at $\frac{1}{2}$ of a nomisma in *kapnikon*

⁵³ Detailed tables of the level of the “accretions” and of the manner in which they were to be collected are contained in the *Palaia Logarike* (cf. p. 976).

⁵⁴ Oikonomides, *Fiscalité*, 26–28.

⁵⁵ *Theophanes Continuatus*, 54.

⁵⁶ Ἐγγραφα Πάτμου, 2: no. 50.

⁵⁷ M. Gedeon, Νέα Βιβλιοθήκη ἐκκλησιαστικῶν συγγραφέων, ἰδία τῶν καθ’ ἡμᾶς, vol. 1.1 (Constantinople, 1903), 7–8.

⁵⁸ Ἐγγραφα Πάτμου, 2: no. 50, lines 312ff.

⁵⁹ In Italy, in 1032 (Codice Diplomatico Barese IV, 45).

⁶⁰ *Actes de Lavra*, ed. P. Lemerle, A. Guillou, N. Svoronos, and D. Papachryssanthou, Archives de l’Athos, 4 vols. (Paris, 1970–82), 1: no. 56.

and one-half in *synone* for the *zeugaratos*, $\frac{1}{2}$ of a nomisma in *kapnikon* for the *boidatos*, and $\frac{1}{4}$ of a nomisma in *kapnikon* for the *aktemon*. This personal tax tended to vary from place to place.⁶¹

Finally, mention must be made of the *kaniskion*, a contribution in kind whose purpose was to provide foodstuffs for the tax collector (*dioiketes*) and his entourage and fodder for their animals. We have information about this for the eleventh century: for each small landowner (whose basic tax might be, say, between $\frac{1}{2}$ and 3 nomismata), the *kaniskion* amounted to one loaf of bread, one chicken, half a *metron* of wine (approximately 4 liters), and one modios of barley (about 12 kg). For a large landowner (paying, for instance, 43 nomismata), this contribution would be tripled.

There were also regular taxes on domestic animals that produced income. The *ennomion*⁶² was a regular charge on such animals and took the form of the payment of money in return for grazing rights on land belonging to the state or the community. For sheep (and, I assume, for goats) the *ennomion* amounted to one nomisma per 100 head of animals in the tenth and eleventh centuries, and to $\frac{1}{3}$ (or $\frac{1}{12}$) of a nomisma per head for oxen and buffaloes. In some texts, the *ennomion* is called a *dekateia* (meaning “rent for the use of grazing land”), and sometimes a distinction was made between the summer and winter *dekateia*, which were charged on all domestic animals apart from plowing oxen and were collected by the state representatives or by the owner of the grazing land. Over time, however, the *ennomion* became more and more a tax on domestic animals, being charged even on bees (the *melissoennomion*, first mentioned in 1152).

A number of supplementary taxes existed in connection with those described above, and although they are best known to us after the eleventh century, they seem to have been introduced somewhat before that time.⁶³ The *aerikon* originally depended on the basic land tax, was charged on animals, and was paid either in cash or in kind;⁶⁴ later the term *aerikon* and, in particular, *aer*, took on quite a different significance and came to mean a type of fine.⁶⁵ The *oikomodion* was a tax that seems to have been introduced from conquered Bulgaria after 1018 and to have consisted of a regular payment to the state of a set quantity of grain on the part of each owner of land. Tenant farmers paid, according to their financial circumstances, the *paroikiatikon*, the *aktemonitikon*, or the *zeugaratikon* (a tax on *paroikoi* who were *zeugaratoi*), or the *zeugologion* (a tax on the pairs of oxen belonging to *paroikoi*), both of which were regular levies on their working animals.

These new regular taxes, which were accepted without any particular protest, and

⁶¹ Documents from the monastery of Iveron (*Actes d'Iviron*, ed. J. Lefort, N. Oikonomides, and D. Papachryssanthou, Archives de l'Athos, 4 vols. [Paris, 1985–95], 1: no. 30 and 2: no. 48) refer to *zeugaratoi* who paid $\frac{43}{48}$ of a nomisma, to *voidatoi* who paid between $\frac{22}{48}$ and $\frac{26}{48}$, and to *aktemones* who paid between $\frac{4}{48}$ and $\frac{7}{48}$.

⁶² Oikonomides, *Fiscalité*, 72ff.

⁶³ *Ibid.*, 80ff.

⁶⁴ For a different etymology and interpretation, see J. Haldon, “Aerikon/aerika: A Reinterpretation,” *JÖB* 44 (1994): 135–42.

⁶⁵ See below, 1038.

the increments added to the land tax demonstrate that throughout the period down to the eleventh century agricultural income in Byzantium must have been growing steadily. This can be attributed to small, but lasting, improvements in the methods of production and to an increase in the quantity of land under cultivation.⁶⁶

Imposed along with regular taxes and charges were the special levies and labor services, which, though theoretically light and required only circumstantially as and when the need arose, might in fact be a considerable burden on taxpayers, bringing in large sums in revenue for the state or the tax collector. The existence of these contributions in kind gave the state economy the flexibility it needed and which the limited volume of the available currency denied it.

Most forms of special levy and *corvée* are known to us from antiquity, and their purpose was to meet the needs of the state on the local level. Since they were imposed in extraordinary circumstances and allowed scope for excesses on the part of the tax collector, especially when converted into payments in cash, citizens saw them as particularly harsh impositions. The medieval terms that replaced the *munera sordida* of late antiquity—including *epereia*, *kakosis*, *zemia*, *vlave*, *epagoge*, and *epithesis*—are revealing of this popular resentment. The true burden of these imposts for taxpayers increased during the course of Byzantine history, and by the eleventh century it was almost insupportable, thus explaining why private citizens sought more and more often to avoid it by obtaining preferential treatment, that is, exemption from imposts.

The first category of impost consisted of the obligations of the subjects of the state toward the civil and military employees who visited them. Such charges were a burden on taxpayers, but they released the state from the payment of certain expenses.⁶⁷ We know, for example, that the *strategoi* of the themes in the West—of the Balkans and Italy, that is—were not paid a salary by the emperor, but instead collected *synetheiai* from their themes.⁶⁸ This was a regular obligation. Less regular was the obligation on the inhabitants of an area to provide hospitality for the servants of state who visited them, and who might make a deliberate point of exploiting this hospitality for their own benefit and that of their entourage. Basil I prohibited such “visitations” (*gyrai*) in order to protect his subjects.⁶⁹

When state employees toured the provinces, they were in a position to look around for “gratuities” (*philodoremata*) of various kinds. These included the *kaniskion* discussed earlier, which was not collected only by the *dioiketes* and which might be replaced by the *antikaniskion*, the payment of a sum in cash that, in troubled times, might become sizable. Another “gratuity” was the *prosodion*, collected by senior and junior officials alike, and the *proskynetikion*, known to us from the eleventh and twelfth centuries and

⁶⁶ Cf. Lefort, “Rural Economy,” 232–33, 310.

⁶⁷ See Oikonomides, *Fiscalité*, 86ff.

⁶⁸ *De cerimoniis aulae byzantinae*, ed. J. J. Reiske, 2 vols. (Bonn, 1829–30), 1:697. A receipt issued in 1016 by the *katapano* of Italy has survived, acknowledging the payment by a certain Kinnamos of 36 *nomismata*, which represented the *synetheia* of the Castelli of Palagiano; F. Trinchera, *Syllabus Graecarum membranarum* . . . (Naples, 1865; repr. Amsterdam, 1964), no. 16.

⁶⁹ Zepos, *Jus*, 2:250.

consisting of a “gift” presented by the subject when he went to “reverence” a lord who had just arrived in the area or in the city.

The category of hospitality also included a number of charges. The *mitaton* (*metatum*) was the obligation on the citizen to have a mercenary soldier billeted on him through the winter: a particularly harsh obligation. The *aplekton* (*applicatum*) was the obligation to provide an area of ground on which a passing army unit or an official in transit, with his entourage, might set up camp; this harsh obligation could be distributed among a number of citizens, in which case it was called a *mesaplekton*. The *kathisma* was the obligation to maintain a public building—a sort of guesthouse—in which senior officials could reside. Hospitality was usually accompanied, furthermore, by the obligation to feed the visitors and their animals (known as the *ekbole* or *choregeia chreion kai chortasmaton*). Less intolerable, though of greater duration, was the obligation upon citizens to take in, as a “guest,” a person whom the emperor might have sent into exile.

In order to meet the needs of the state in kind, provision was made for the obligation, in special circumstances, to sell goods to the state at a price fixed by it: the late Roman *synone*, now called the *exonesis* and intended above all to safeguard the supplies of Constantinople. There could be compulsory sales of foodstuffs, and especially of animals, to the state; and crops of all kinds, and animals, might have to be ceded for the use of the state (this included, in particular, *sitarkesis kastrou*, the obligation to supply a fort with food, or *monoprosopon*, the requisitioning by the army of a horse or mule, which was applied only to the more prosperous).

The *corvée* (*angareia*)⁷⁰ and the *para-angareia*, a secondary *corvée*, could be defined as compulsory, unpaid labor of all kinds. In the late Roman period, it was associated with the state’s communications services (the *dromos*), but in Byzantium it was a broader concept that also covered the compulsory labor provided by the *paroikoi* for their overlord. There were special *corvées* that involved the cutting and transportation of timber, the sawing of planks, and the making and baking of bread (*psomozemia*), all for state needs. But the most important *corvée*—and the most difficult to elude—was the provision of personal labor (which could be substituted by a cash payment) for the construction or repair of roads, bridges, and forts (*hodostrosia*, *gephyroktisia*, and *kastroktisia*, respectively), or even for the building of warships (*karabopoiia* or *katergoktisia*), a *corvée* that was particularly resented because the existence of the new ships automatically and inevitably meant the compulsory recruitment of crews from the surrounding area.

Another of the imposts was the compulsory recruitment and arming of light troops to take part in specific operations. These soldiers, who sometimes served in the local garrison (*taxatoi*), could also be sailors (*ploimoi*), spearmen (*kontaratoi*), archers (*toxotai*), mounted archers (*hippotoxotai*), or cudgel-men (*matzoukatoi* or *malartoi*). Their role in the army was an auxiliary one, as was that of the blacksmiths (*komodromoi*) who accompanied expeditionary forces and were recruited in the villages, which were thus deprived of the smith’s services for the duration of the campaign.

These special imposts were borne by all the taxpayers who did not enjoy privileges,

⁷⁰ Oikonomides, *Fiscalité*, 105ff (with bibliography).

with the exception of certain categories who were under special obligations.⁷¹ The most important of these categories was that of the soldiers of the themes: those, in other words, who held military land, kept their own horses and weapons, and took part—for pay—in campaigns but were exempt from all other imposts. If such a soldier was unable to take part in the campaign, he was obliged to buy out his service by paying the *strateia*, amounting to between 4 and 6 nomismata per campaign. This obligation was passed on to his descendants along with the land.

A second category of obligation was the *dromike strateia*, the *enochē* of the *dromos*, by which some villagers were obliged to provide care, free of charge, for the horses and messengers of the imperial post, in exchange for which they were exempt from all other corvées and imposts. The number of individuals in this category was small, and references to them in the sources are rare. Also of entirely marginal importance from the numerical point of view were the fishermen who obtained the *murex* from which purple dye was extracted. They, too, were free of special taxation.

What did these tax charges amount to? Using the particulars given above, we can attempt to estimate the tax burden on farmers.⁷² This estimate will apply primarily to the owners of land, who were the persons liable for the payment of tax. Given that land was usually worked by a rental system, one also has to bear in mind that there were two ways of paying land rent: as a predetermined sum, usually in cash (the *pakton*, amounting to one nomisma for 10 modioi of first-class land)⁷³—in which case the person cultivating the land was solely responsible for all the risks that entailed—or as a proportion of the harvest, usually one-third (the *morte*),⁷⁴ where both parties shared the risks. The payment of rent in kind was certainly more advantageous to the farmer

⁷¹ Ibid., 117ff (with bibliography).

⁷² Ibid., 122ff (with bibliography).

⁷³ Ἐγγραφα Πάριου, 2: no. 50 (1073, western Asia Minor); *Iviron*, 3: no. 67, line 35 (1295, Macedonia). There is also indirect evidence to confirm this information about the *pakton*. The metrological text of the Paris codex, dating from the 10th century (see above, 975–76), states, it is true, that the revenue from rented state land ought to be calculated at a rate double that of taxation—that is, for first-class land, at 1 nomisma for 12 modioi of land (*Géométries*, 62, lines 32–34)—explaining that the reason for this is the expenses involved in working the land. The same information is supplied by the Farmers' Law (of the 6th–8th centuries) and the Fiscal Treatise of the San Marco codex (12th century; see above, 977); the latter source adds that the “accretions” should be deducted from the second half of the income, that which remained in the hands of the owner of the land (Dölger, *Finanzverwaltung*, 123, lines 1–8). I assume that these “expenses” account for the difference between the information provided here (income of 1 nomisma per 12 modioi of first-class land) and the testimony of the two documents cited above, which speak of a *pakton* of 1 nomisma per 10 modioi of first-class land. This difference (though of limited practical significance, given the general and hypothetical nature of all our calculations) goes some way toward accounting for the discrepancies between the calculations that follow and those of Lefort, “Rural Economy,” 300–305.

⁷⁴ Testimony to the renting of fields in return for one-third of the grain crop comes from a 14th-century specimen agreement (K. Sathas, Μεσαιωνική Βιβλιοθήκη, 7 vols. [Venice, 1872–94], 6:622 (hereafter Sathas, *MB*), and such arrangements were common during the period of Ottoman rule in Greece. I believe that they first appeared toward the end of the 11th century, when we have a reference to *trittotai* among the civil servants collecting money on behalf of the state; P. Gautier, “*Diatribes* de Jean l'Oxite contre Alexis Comnène,” *REB* 28 (1970): 31; cf. Laiou, “Agrarian Economy,” 338–39.

than the *pakton* (for he was partially protected against a poor harvest and did not need to find cash to pay the rent in money); at the same time, the *morte* system must have yielded more to the landlord than did cash rents. In what follows, I consider that for the middle Byzantine period it is probable that the average yield was 4–5 parts of crop for each part of seed on high-quality land.⁷⁵

Given the above particulars, one can propose the following distribution of the landowner's income: on the basis of the Miletos *praktikon* of 1073, the *pakton* that the landowner collected from his tenants corresponded to one-tenth ($\frac{1}{10}$) of the value of the land he rented to them. This sum was broken down as follows:

- $\frac{2}{120}$ (approx.): management costs
- $\frac{5}{120}$: land tax ($\frac{1}{24}$ of the value)
- $\frac{1}{120}$ (approx.): accretions
- $\frac{4}{120}$ (approx.): the landowner's income after tax

It must have been a similar distribution of income that Eustathios Boilas had in mind when he recorded in his will (1059) the value of the land he was leaving to his two daughters and the income that each could expect after the payment of tax: (1) Estate A—value, 2,160 nomismata (plus grazing ground of unknown value); income, 80 nomismata. Bearing in mind the form of calculation proposed above, the *pakton* would have been 216 nomismata, broken down as follows: 36 nomismata management costs, 90 nomismata land tax, $13\frac{1}{3} \frac{1}{24}$ nomismata accretions, in accordance with the *Palaia Logariske*. This leaves a net *pakton* of $76\frac{15}{24}$ nomismata, to which we have to add $3\frac{9}{24}$ nomismata from the *ennomion* of the grazing land (not included in our calculation because the figures are deficient), to reach the 80 nomismata referred to by Boilas. (2) Estate B—value, 1,440 nomismata; income, 50 nomismata. Using the same formula, the *pakton* would have been 144 nomismata, broken down as follows: 24 nomismata management costs, 60 nomismata land tax, and $10\frac{1}{4}$ nomismata accretions under the *Palaia Logariske*, leaving $49\frac{3}{4}$ nomismata, which Boilas presumably rounded up to 50.⁷⁶

In order to make clear the consequences of land taxation for the average taxpayer, take the imaginary example of an estate consisting of 360 modioi of first-class land in western Asia Minor, on which wheat was the sole crop. Such monocultures may not have existed at that time, but an approach of this kind facilitates the calculations by eliminating the incalculable income from intensive crops. In any case, the calculations proposed below are of statistical interest only.

⁷⁵ This estimate is based on certain data that, although not absolutely certain, seem to offer considerable verisimilitude. For example, I believe that since the *vita* of St. Nicholas of Sion relates that by the intervention of the saint the harvest on a piece of land was five times the seed sown, then a yield of 1:5 must have been considered high. However, there are other accounts that refer to higher yields in other areas, leading Lefort ("Rural Economy," 301) to give a grain yield of 1:5.6. Since we lack any extensive references in the sources, we are compelled to rely on estimates; there is no way of proving what the real yield of even one planting of wheat in Byzantium may have been, far less what the average yield (of interest to us here) was. However, all the calculations we propose are based on assessments of productivity that may differ, and those differences will have a corresponding effect on our estimates of the standards of living of villagers.

⁷⁶ Cf. Oikonomides, *Fiscalité*, 126–27.

Furthermore, the calculations do not give any consideration at all to fallow land, to crop rotation, or to the possibility of two harvests in the same year. There is no mention whatever of such measures—intended to improve the yield of the land—in the fiscal texts, and presumably they were not taken into account when calculating tax. I assume that the tax assessor started out with the hypothesis that all the land was cultivated each year, ignoring any improvements that the activities referred to above might have brought about. I also ignore them and assume that all the land was sown only once each year.⁷⁷

First example: the owner has rented out all his land and consequently collects on it an income that calls for neither investment nor effort on his part. This must have been the way in which large landowners worked their property. They would have had to pay out certain management expenses to their stewards, which have not been taken into consideration here: (a) if the landowner collects a *pakton* (of 36 nomismata), tax and accretions will take $19\frac{27}{48}$ nomismata, thus accounting for some 54% of his income; (b) if the land is sharecropped (the *morte* system), the landowner will receive $\frac{1}{3}$ of average production, that is, 480–600 modioi of wheat, of a total value in Miletos in 1073 of 40–50 nomismata,⁷⁸ on which he will pay a tax of $19\frac{27}{48}$ nomismata, corresponding to 39–49% of his income.

These calculations do not take account of special taxation and corvées. However, since the cultivators, rather than the landowner, were principally liable for these, the omission is of negligible significance.

Second example: the landowner works on the land himself, with members of his extended family. He has income in kind of 1,440–1,800 modioi of wheat per year, from which 360 modioi has to be deducted as the seed for the following year. This leaves 1,080–1,440 modioi, worth 90–120 nomismata, on which the landowner will pay $19\frac{27}{48}$ modioi in land tax plus 3 nomismata in personal tax on the three *zeugaratoi* villagers whom he needs to work the land. The tax thus amounts to 22.5 nomismata, or 18.75–25% of his income.

Here, too, I have omitted special taxation and corvées, which were paid by whoever cultivated the land and are impossible to estimate per se. However, we do know that farmers could be exempted from all these extra payments if they were soldiers, and we know that the military obligation could be bought out by the payment of a contribution of 4–5 nomismata (the *strateia*). One can thus hypothesize that in the eyes of the Byzantines of the eleventh century the “value” of all special taxation and corvées could be assessed at about 4–5 nomismata per year. In fact, 4 nomismata per year was the assessment put on all the corvées of the villagers of Lampsakos in 1219.⁷⁹ Consequently, if we add these 5 nomismata to the 22.5 nomismata of land and personal taxes, we

⁷⁷ Here there is a substantive difference from Lefort (“Rural Economy,” 301), who estimates that only five-eighths of the land was cultivated every year. However, his calculations are based on a higher yield, as might result from land that was allowed to rest.

⁷⁸ The price of wheat in Miletos in 1073 is known from the *praktikon* for that year, Έγγραφα Πάτμου, 2: no. 50, line 318.

⁷⁹ G. L. F. Tafel and G. M. Thomas, *Urkunden zur älteren Handels- und Staatsgeschichte der Republik Venedig*, 3 vols. (Vienna, 1856–57), 2:219 (hereafter Tafel and Thomas).

arrive at a total tax burden on the order of 23–30% on the income from land farmed by its owner.

I have based these calculations on the sum left to the owner of the land after deducting the basic expenses involved in cultivation (the share retained by the *paroikoi*, in the first instance, and seed for the following year, in the second).⁸⁰ In other words, we have the relationship between state revenue and agricultural value added.

If, in order to simplify and facilitate these comparisons and make them uniform, we calculate the percentage of the entire harvest corresponding to tax before the deduction of any expenses at all, we will arrive at the following results: land tax with its accretions and personal tax amount to 15–18.75% of the harvest, while with the addition of special taxation and corvées the total tax burden on farmers amounts to 18.33–22.91% of the harvest (revenue/gross production).⁸¹

Of course, it must be remembered that of the state revenue collected in this way, four-fifths had to be paid in cash and only one-fifth could be paid in kind or in the form of services, and that there was a relentless trend for that one-fifth to be converted into payments in cash. By medieval standards, the tax system was completely monetized.

Another characteristic of the system was the manner in which the tax was collected, which was designed to safeguard state revenue. Taxpayers were treated as economic units of a certain given significance, whether as large landowners or as *choria* (groups of small landowners living in the same place). Each of the units had to render the sum set for it, regardless of whether some parts of the unit were experiencing difficulties. In other words, there was compulsory solidarity among the members of the village community where the tax collector was concerned. The members of the community were not only obliged to contribute to the payment of the shared tax burden (such as that on community grazing land or on the working of the community forest); they also had to top up the individual taxes of such members of the community as were unable, for reasons of *force majeure*, to pay it. In order to prevent the overtaxation of the villagers—who would thus be in danger of ruin and would be forced to move elsewhere, in which case the entire sum in tax would be lost—the state sent out emissaries (the *epoptai*) to ascertain whether there was some long-standing problem and to grant to the taxpayer (or the community) the appropriate *kouphismos* (partial relief) or *sympatheia* (complete relief) from the tax not paid because, for example, the villager had moved elsewhere or had died without leaving heirs. If the problem was rectified, these civil servants would set the tax position right with the first debtor or his successor (*orthosis*). It often happened that this successor, especially when he was a neighbor, had tacitly been working the abandoned fields in the past, and so the payment of three years' back tax was demanded from him (*opisthoteleia*).

⁸⁰ Seed was the most substantial burden on the crop, but it was not the only one, since the depreciation on tools, oxen, etc., also had to be taken into consideration. These supplementary items of expenditure have been omitted from my calculations.

⁸¹ Cf. the calculations in Lefort, "Rural Economy," 303–4ff.

The State as Landowner

The state was the largest landowner of all. To it belonged all the land that was not owned by private individuals or institutions. Land that had been abandoned and on which no tax had been paid for thirty years was declared to be *klasma* and became the property of the state. The state also owned lands gained by conquest, if they had been abandoned by their previous owners.

In practice, of course, the effects of this general and unrestricted state ownership were limited by widespread and uncontrollable encroachment, which became legal after thirty years because of usucaption and prescription (time-barring). In 996, Basil II attempted to deal with this problem by legislating that the prescription where state land was concerned could be questioned, by the state side, as far back as the time of Caesar Augustus.⁸² As in the past, of course, the difficulty of preventing encroachment on state land was largely the result of the inherent weaknesses of an administrative mechanism staffed by aristocrats that was called upon to take action against aristocrats. As a result, the means most frequently employed of checking whether or not encroachment had occurred was *hikanosis*, that is, examination of whether the tax paid by a landowner on his property corresponded to that which he ought to have paid on the basis of its value. If there was found to be a surplus of land (*perisseia*), this was confiscated and became the property of the state. Behind this procedure lay the idea that a private citizen had illegally encroached on state land, and consequently it was not sufficient to increase the sum in tax he was to pay; the land he had illegally appropriated had to be taken from him (since an increase in taxation would merely have set the official seal on his ownership of it).

In the case of *klasmatic* land—that which came into the possession of the state after being abandoned for thirty years—the following policies were implemented until the beginning of the eleventh century.⁸³ (a) If the land lay within an inhabited village (and consequently was being cultivated to some extent by neighbors or tenants), it was ceded to one of the neighbors, who initially paid a reduced sum in tax and then the full rate, becoming the owner of the land without having bought it; or it might be sold at its true value, in which case only $\frac{1}{12}$ of the full tax rate was payable. This last arrangement was beneficial only to the powerful landowner, who had cash available. (b) If the land was in an abandoned area (a *petiton*), as a result of which it had ceased to be cultivated, and if it was located far from potential cultivators, the state was forced to sell it at an extremely low price and, furthermore, to charge only $\frac{1}{24}$ of the normal tax rate on it, with the prospect of doubling that figure after fifteen years to bring it up to the *libellikon demosion*, the rate of $\frac{1}{12}$ of the full tax that was normally charged on *klasmatic* land.

⁸² N. Svoronos, *Les nouvelles des empereurs macédoniens concernant la terre et les stratiotes*, ed. P. Gounaridis (Athens, 1994), 212, 213.

⁸³ N. Oikonomides, "Das Verfalland im 10.–11. Jahrhundert: Verkauf und Besteuerung," *FM* 7 (1986): 161–68.

That was the situation to the time of Basil II. He attempted to increase the assets of the state, introducing a new policy that was to remain in force until the end of the Byzantine Empire. The state now tended to retain and work directly any productive land that happened to come into its possession, whether as a *klasma* or in some other way. In other words, until the tenth century the state sought to pass land on to its subjects in order to collect the tax on it, whereas after that time it retained the land and attempted to exploit it directly by leasing it to *paroikoi*. Under the new method, there was undoubtedly an increase in the assets of the state, but the composition of society in rural areas changed substantially as the number of dependent villagers (*paroikoi*) rose. In other words, there was a tendency for the economic benefits of the state to be maximized to the detriment of the social structure of the provinces, as the state turned to implementation of the same policy as that which the *dynatoi*, the large land-owners, were also applying.⁸⁴

In practical terms, it is impossible to draw a clear dividing line between the land assets of the state and those of the crown. There is a general impression that the crown's property consisted largely of properly organized estates, whereas the state tended to own scattered pieces of land, often within village communities. There are, however, numerous exceptions to this general distinction, whose roots usually lie in the history of the land. The principal characteristic was that the state demanded the payment at least of tax on the land that belonged to it, while the crown's enterprises collected rent (and, of course, did not pay tax to the state). In 1044, for instance, the *klasma* of Eucheia was the object of a dispute between the state and the *kouratorikion* of Mangana, with the former demanding the payment of tax and the latter of a *pakton*. When the estate was granted to Nea Mone on Chios, the *pakton* of the *kouratorikion* was abolished, since the land was now owned by the monastery, which, however, continued to pay tax to the state.⁸⁵

Exploitation of the scattered pieces of land that came into the possession of the state always took the form of leasing, usually with the collection by state officials of a *pakton* from such neighbors as might be interested. In the case of estates, however, such as the *episkepsis* of Alopekai in 1073, the land was worked partly directly, by slaves and animals belonging to the estate, and partly by leasing to villagers who owned small-holdings in the area and who thus became the *paroikoi* of the estate. This system (that of *paktosis*) seems to have prevailed, ultimately, because it was more profitable in that it required less investment and offered no risks. However things may have been, the management of these *episkepseis* was also open to entrepreneurs, who were entitled to lease them but often ran into difficulty with the local aristocracy.⁸⁶ The crown estates yielded revenue in cash and in kind.

Over and above the land traditionally owned by the crown, *kouratoreiai* and *episkepseis*

⁸⁴ Cf. Lefort, "Rural Economy," 281ff, 287ff.

⁸⁵ Zepos, *Jus*, 1:616, 617.

⁸⁶ M. Kaplan, *Les hommes et la terre à Byzance du VI^e au XI^e siècle: Propriété et exploitation du sol* (Paris, 1992), 323.

were also set up in the lands conquered from the Arabs in the tenth and eleventh centuries. In Melitene, Podandos, Tarsos, Artach, Cyprus, the Armenian themes, and elsewhere, new economic units of one type or another appeared, bringing the crown a generous income in cash and kind.⁸⁷ These units were clearly set up on lands the Arabs had abandoned, which thus passed automatically into the possession of the crown.⁸⁸

In the tenth and particularly the eleventh century, these two rather cumbersome ways at the state's disposal for exploiting land were joined by a third, inspired by private practice and consequently more flexible: the creation of charitable foundations functioning on the same principles as monasteries. The emperor (or a private citizen) set up a charitable institution associated with a monastery, which he then endowed with assets for its maintenance. As the founder, he of course retained the right to dispose as he pleased of any surplus produced by the management of the charitable foundation. The foundation thus functioned as an autonomous organization, and given its nature was likely to see its assets constantly increase because of the donations it attracted from private individuals. Management of these assets produced a surplus, which could now be ceded by the emperor to a member of his family. As examples, one might cite the Petrion, founded by Helen, wife of Constantine VII; the Myrelaion, founded by Romanos Lekapenos; the Hebdomon, founded by Basil II; the *sekretion* of the Tropaiophoros, founded by Constantine Monomachos; and Christ Antiphonetes, founded by Empress Zoe. Our knowledge of the way in which these foundations operated and of their purely financial aspects comes from a private charitable foundation, that of Michael Attaleiates, that has been studied in great detail on the basis of its *typikon*, which has survived.⁸⁹ The state also exploited mineral deposits on a direct basis, but we know nothing of the economic significance of mines and of the way in which they were run.⁹⁰

The State and Exchange

The main indirect tax continued to be the *kommerkion*, levied at 10% in cash on the value of merchandise in transit for sale in a given market (see above, pp. 987–88). Where the area of Constantinople was concerned, the tax was collected at Abydos and Hieron, the two points where the straits were controlled. In the rest of the empire, it was collected in the marketplace, at fairs, and perhaps at the borders. The *kommerkion* does not seem to have been charged on unofficial sales and purchases, which explains the creation of “satellite” markets around the Constantinople area for those who did not wish to bring their goods into the markets of the capital.⁹¹ In other words, the *kom-*

⁸⁷ J.-C. Cheynet, “*Episkeptitai* et autres gestionnaires des bien publics,” *Studies in Byzantine Sigillography* 7 (2002).

⁸⁸ Cf. M. Kaplan, “Maisons impériales et fondations pieuses: Réorganisation de la fortune impériale et assistance publique de la fin du VIII^e siècle à la fin du Xe siècle,” *Byzantion* 61 (1991): 340–64.

⁸⁹ P. Lemerle, *Cinq études sur le XI^e siècle byzantin* (Paris, 1977), 67–112.

⁹⁰ See K.-P. Matschke, “Mining,” *EHB* 115–20.

⁹¹ Oikonomides, “The Economic Region of Constantinople” (as above, note 36).

merkion was not an import duty; it was probably a charge payable by those who used the market, but for reasons of convenience it was collected when the goods were imported and might be refunded when unsold goods were reexported.

There is no way of calculating how important the *kommerkion* was for the state budget. Many scholars have assumed that the state revenue from it must have been considerable, but we have no certain figures. The few texts at our disposal seem to indicate that the overall level of sales and purchases was comparatively restricted, even in Constantinople, until the tenth century. Furthermore, an official text of 911/12 seems to imply that the *kommerkion* in Mesopotamia yielded about 20 litrai of gold (1,440 nomismata) per year, while that of Chaldia yielded approximately half that sum.⁹² Bearing in mind that both these provinces were at the ends of the great roads leading from Persia into Asia Minor, it is surprising to find that the turnover of the importers from the East was so small. The sum cited is too small even if we hypothesize that it concerned only such merchandise as was consumed locally and not that dispatched to the center, on which the *kommerkion* would be paid when it reached the Constantinople area.

There can be no doubt that the movement of goods was subject to other charges connected with the circulation of persons and commodities, with the means of transportation, and with the sale of goods. References to these charges come largely from subsequent periods and are dealt with below, particularly in view of the fact that their economic significance was relatively restricted.

Also of limited importance were certain other items of state revenue, to which I shall simply refer. Fines were paid directly into the imperial *vestiarion* (or the *sakelle*);⁹³ the state could lay claim to, and often received, one-half of all treasure found by private citizens;⁹⁴ and the emperor retained for himself one-third, and later one-fifth, of all spoils of war. It is impossible to estimate the significance of this revenue for the state, although scholars presume that it must have been marginal. I shall not, consequently, be dealing with it here.

The Sale of Titles and Allowances

Among the most important sources of revenue for the state was the attraction of private capital on the basis of the system of life-tenured administrative posts and titles of honor. We know of this system from the tenth century thanks to some texts from the *Peri basileiou taxeos*,⁹⁵ and we also know that it continued in force unchanged into the eleventh century, at which time it went through a profound crisis and was abolished.

⁹² *De cer.* 1:697; cf. Laiou, "Exchange and Trade," 735–36.

⁹³ To the *sakelle* in 897, to the *vestiarion* after 1007 (*Lavra*, 1: no. 1, line 29, and *Iviron*, no. 12, line 29).

⁹⁴ C. Morisson, "La découverte des trésors à l'époque byzantine: Théorie et pratique de l'εὕρεσις θησαυροῦ," *TM* 8 (1981): 321–43.

⁹⁵ *De cer.* 1:692–94, studied in depth by P. Lemerle, "Roga et rente d'état aux Xe–XIe siècle," *REB* 25 (1967): 77–100.

The system functioned in two main ways, depending on whether there was provision for the payment of a salary (*roga*) by the state (cf. the general observations on this, p. 983 above).

Some life-tenured administrative posts, especially in the finance departments, could be purchased by those interested in doing so, at extremely high prices. In the tenth century, the purchase price of a position as *notarios* or *chartoularios* in a *sekretion* based in Constantinople ranged from 1,440 nomismata (*notarios* of the *stratitikon*) to 4,680 nomismata (*chartoularios* of the *genikon*).⁹⁶ It would seem that there was no *roga* attached to these posts, but they brought in a good income from the contributions of citizens using the officials' services. In other words, the services provided by these officials constituted yet another indirect tax on citizens, part of which was collected in advance by the state and subsequently used for the maintenance and enrichment of the officials themselves.

Most of the positions to which a *roga* was attached were in the imperial secretariat (*asekreteia*) or in the imperial clergy. Of course, there were also titles of honor, at least some of which had originally denoted the servants of the emperor, such as *mandator* (messenger), *strator* (stableman), *spatharios*, *spatharokandidatos*, and *protospatharios* (bodyguards of various ranks), and the corresponding titles for eunuchs. These titles were a guarantee of a place in high society and determined the degree of familiarity between their holder and the emperor. The highest title of all, that of *protospatharios*, also meant a position in the senate. Such titles were thus much sought after for the social distinction they conferred; in addition, for historical reasons, they ensured the holder of a salary.

However, in order to obtain one of these posts, aspirants had to pay the state a very large sum of money, the "price" of the office, which was never refunded. Needless to say, the title could not be freely purchased, and applications had to be approved by the emperor. It would thus be more accurate to speak of the concession, for a consideration, of titles and official positions than of the sale of these offices. We also know that emperors often took the opportunity of their ascent to the throne or some other notable event to express their gratitude to one of their subjects or reward some unusual act by granting a title free of charge or promoting him to a higher title involving a larger salary. However, such acts of generosity were not capable of disturbing the foundations of the system, which had been devised in order to serve the purposes of the state economy.

An investment in a title, although it involved the receipt of an annual *roga* guaranteed by the state, was not a profitable move for the citizen, in purely financial terms, for the following reasons. (a) The *roga* secured by the investment did not usually amount to an annual return of more than 2.5–3.5% on the investment, significantly less than the

⁹⁶ In the 10th century, the price of a position as *notarios* was from 20 to 55 litrai, depending on the department to which the official was attached, and the price of the position of *chartoularios* was from 20 to 65 litrai. However, there were also some positions of *notarios* and *chartoularios* that were not for sale. Cf. *De cer.*, 1:694.

usual rate of interest, which was about 6%. Only in some cases of senior titleholders (*protospatharioi*), which were normally held by individuals of more advanced age, since they would have had to pass through the junior ranks of officialdom first, did the return on the investment reach 5.55–8.33%. (b) The sum invested could never be refunded and was consequently lost forever to the investor. (c) The *roga* was granted for life and could not be inherited. As a result, in an age when various infections and diseases kept life expectancy low, the prospect that both the capital and the income might be lost within a short space of time was a far from unlikely one.

Clearly, then, for the system to have functioned successfully, other incentives must have been at work. Where the administrative positions were concerned, we can presume that there was additional income; for example, those employed in the imperial secretariat can be assumed to have enjoyed frequent “windfalls.” As for the titles of honor, there were of course social incentives, so powerful that the vain might well be induced to overlook purely financial criteria. Constantine Porphyrogennetos tells of a wealthy cleric who gave Leo VI 60 litrai of gold in order to obtain the title of *protospatharios*, the salary of which was only one litra per year, adding that he died in the second year and had thus collected *roga* of only 2 litrai.⁹⁷

This system generated so much revenue for the state that an effort was made to offer purely financial incentives. Officials who had already invested large sums of money in the purchase of titles that yielded them little were able to buy a higher *roga* on more attractive terms: “the price is to be increased in proportion to the *roga*,” with 7 more nomismata of annual *roga* for each litra invested with the state.⁹⁸ The rate of interest offered on this new investment was a higher one, 9.72%, far above the rate available on the open market. Yet in order to buy extra *roga* at a high rate of interest, one had first to have bought the title; in other words, one had to have invested large sums of money in the state at low rates of interest and then add to them further large sums of money that would then yield a satisfactory income. As a result, the investment inevitably amounted to an immense sum, while the disadvantages of the life salary and the inevitable loss of the capital remained.

The system functioned without interruption until the eleventh century, and I suspect that its management was concentrated in the hands of the *sekretou tou eidikou*, which paid the *rogai* of the senate.⁹⁹

State Expenditure

The *roga*, which accounted for the greater part of the state’s expenditure, was paid in cash: usually in gold coins, but also in the silver and copper subdivisions of the monetary unit.¹⁰⁰ To this expenditure, we must add certain supplementary payments in

⁹⁷ *De Administrando Imperio*, ed. G. Moravcsik and R. J. H. Jenkins (London–Washington, D.C., 1962–67), chap. 5, lines 236ff (hereafter *DAI*).

⁹⁸ *De cer.*, 1:692.

⁹⁹ Lemerle, “Roga,” 95–96.

¹⁰⁰ Cf. N. Oikonomides, “Title and Income at the Byzantine Court,” in *Byzantine Court Culture from 829 to 1204*, ed. H. Maguire (Washington, D.C., 1997), 199–215.

kind, particularly in silk cloth, which was generally recognized as being of great value. The Byzantine palace retained its monopoly in the manufacturing of high-quality silks, and especially those dyed with purple, distributing them with great care and only selectively: the better the quality of the silk, the higher the rank of the officials who were entitled to receive them. Lower-ranking officials in the economically underdeveloped provinces of the East had to be content with the cheaper materials the emperor procured in the free market of Constantinople. In other words, silk functioned as a substitute coinage (indeed, in some cases, payments in silk were replaced by payments in cash). As a renewable commodity, it gave the state economy a degree of flexibility, but I doubt whether its significance for the economy was very great, since in order to sustain demand it could only be manufactured and distributed in small quantities.

Other payments in kind were restricted in extent and relatively insignificant for the state budget, given that most of them consisted of quasi-tax charges paid directly by the subjects of the state to the beneficiaries without the intervention of civil servants, far less of the central administration. As we shall see, only those employed in Constantinople seem to have received some payments in kind from the state.

The principal item of expenditure for the state was, of course, salaries, which constituted the means for channeling money to the general public. All senior officials and military commanders, most of the holders of titles of honor, many civil servants, and all army officers when engaged in operations of any kind received a salary (*roga*), great or small, distributed by the emperor or his representative, usually on Palm Sunday and in Holy Week. This handout emphasized the personal relationship between the recipient of the salary and the emperor, who deemed it to be his right to alter the sum of the *roga* if some special need or special circumstances arose.

Bishop Liutprand of Cremona, who attended the distribution of the *roga* on Palm Sunday in 950, tells us that it consisted of gold pieces and *skaramangia* (silk cloth), and that the most senior officials collected such large sums that they found them almost too heavy to carry. The *domestikos* of the *scholae* and the *droungarios* of the *ploimon*—the commanders, that is, of the army and the fleet—had to be helped to drag away the bags containing their salaries. A *magister*, says Liutprand, would collect 24 litrai of gold pieces, that is, 1,728 coins, weighing 7.68 kg. As the hierarchy of recipients descended, so the sum of the *roga* dwindled.

We also possess completely reliable information as to the level of the salaries of Byzantine civil servants. When Constantine IX Monomachos established, by law, the post of professor of law in Constantinople (the *nomophylax*), he also determined his income: he was to receive each year, from the hand of the emperor, a *roga* of 288 gold pieces (4 litrai), a length of silk (the *blattion*), and a symbolic gift of some value (the *baïon*). The state would also provide him with a certain quantity of foodstuffs for his sustenance, but the total value of these does not seem to have been significant.¹⁰¹

This particular example concerns a high-ranking official, but one who did not incur

¹⁰¹ A. Salac, *Novella Constitutio saec. XI medii* (Prague, 1954), 25; cf. also "Title and Income." We know that in the 10th century other low-ranking officials received some 25 kilos of wheat per month as a subsistence allowance (Zepos, *Jus*, 1:227).

any significant expenses in the course of his work. Other officials enjoyed higher salaries; they included the *hypertimos*, who in 1082 was entitled to 20 litrai of gold coins (though in the meantime these had lost two-thirds of their real value) and the judges of the time of Andronikos I, who collected the equivalent in silver coins of between 13 and 26 litrai of gold in order that they might remain above suspicion.¹⁰²

The salaries of the military and civil commanders of the provinces—the *strategoi*—were on a different scale and are known to us from a catalogue of the year 911/912.¹⁰³ The *strategoi* of Asia Minor, Thrace, and Macedonia received 20–40 litrai per year, those of the maritime themes 10 litrai, and the “guardians of the passes” (the *kleisourarchai*), who did not hold the rank of *strategos*, received only 5 litrai. In the tenth century, the *strategos* of Taron was paid 20 litrai.¹⁰⁴ The *strategos* of Mesopotamia collected the *kommerkion* of his province rather than receiving a salary, while the *strategos* of Chaldia received half his salary and collected the other half from the *kommerkion*. None of the *strategoi* of the western provinces—from the Strymon to Italy—received a salary, but they collected *syntheiai* from the fortified cities in their province (see above, p. 999), amounting to sums that we can assume were commensurate with those received by their colleagues in the East, the only difference being that the money in question neither entered nor left the treasury in Constantinople, as was the case with the cash collected by the *strategoi* of Chaldia and Mesopotamia. Even in the public administration, which seems to have been based primarily on the *roga*, one can identify mechanisms for the direct collection of state revenue in the provinces and for its appropriation by civil servants as a substitute for a salary. These mechanisms, being more flexible, would clearly have added to the flexibility of the fiscal sector.

The salaries of the *strategoi* may look large, but of course considerable expenditure was attached to the post. Each *strategos* would have to pay his bodyguard and his personal administrative staff, provide his own servants, and keep his palace in order. In other words, the *roga* of the *strategos* was in fact an annual budget in which the salary of the official himself was included. To it, needless to say, we must add the various “windfalls” the *strategos* might manage to extract directly from the inhabitants of his theme; although such payments might amount to a considerable sum for the *strategos* and his staff, they appeared nowhere in the books of the official state economy.

The salaries the emperor paid in person to the *strategoi* each year totaled 26,640 gold coins and accounted for a significant portion of the regular expenditure of state, given that they covered the expenses of half the provincial governors and their immediate staffs. At about this period, the *Kletorologion* of Philotheos, written in 899, tells us that there were a total of sixty senior state officials in charge of major departments, of whom only twenty-five were *strategoi*. If we assume that the officials who were not *strategoi*, all of them based in Constantinople, were paid by *roga* (as seems likely), that most

¹⁰² Zepos, *Jus*, 1:369; *Nicetae Choniatae Historia*, ed. J. L. van Dieten (Berlin–New York, 1975), 330 (hereafter Choniates).

¹⁰³ *De cer.*, 1:696–97.

¹⁰⁴ *DAI*, chap. 43, lines 68–69.

of them (with the exception of the military men) would not have had to maintain a personal “court” of their own, and that consequently the level of their salaries ought to be put at about that of the *nomophylax*, then we can hypothesize that the total salaries of the sixty leading imperial officials and officers cannot have exceeded 60,000–80,000 nomismata per year, around 300–350 kg of gold. To this, we must add the salaries attached to the titles of honor, which were certainly much more numerous but also, on average, lower. We can imagine, then, that on Palm Sunday and in Holy Week each year the emperor and his assistants would have had to distribute about a ton of gold in the Hall of the Nineteen Akkoubitoi.

So far, I have been discussing the salaries of high society. Further down in society, salaries were undoubtedly lower, but the number of people receiving them was much larger and consequently the sums involved were greater. We do not know what it cost to keep the army of a theme in peacetime. It may well be that the soldiers were not paid at all, since they could be sure of maintaining themselves from the military land they held, and would be paid only when mobilized, once every four years.¹⁰⁵ Their officers and noncommissioned officers (NCOs), however, who were career soldiers, must have received something. We know that in the early ninth century the *roga* of the entire theme of Armeniakon, which the Arabs had seized during a raid, amounted to 1,300 litrai of gold (93,600 nomismata), while the *roga* taken by the Bulgarians on the Strymon—presumably that of the theme of Macedonia—was 1,100 litrai (79,200 nomismata).¹⁰⁶ These two figures, which denote what a theme could collect when it was mobilized, come from different sources, and are of a comparable order, can thus be viewed as reliable. They should not surprise us with their magnitude, since in the early ninth century the themes were still very large, corresponding to four of the themes of the early tenth century. If we bear in mind that the figures include the salaries of all the officers and NCOs, then we can conclude that merely to mobilize a theme was an extremely costly undertaking.

Further substantial sums were spent on the salaries of the soldiers stationed permanently in the capital, of those who served in the imperial bodyguard (the *hetaireiai*), and of those attached to the crack brigades of the imperial guard (of which there were only four in the early 10th century, the *scholai*, the *exkoubitoi*, the *arithmos*, and the *hikanatoi*; others such as the *stratelatai*, the *satrapai*, and the *ethnarchai* were added at later dates). We know that these few thousand heavily armed men were paid between five and ten times more than the soldiers of the themes in the event of a campaign.¹⁰⁷ Their *roga*,

¹⁰⁵ This is confirmed by a text in *De cer.*, 493–94, which I have tried to interpret in “Middle Byzantine Provincial Recruits,” 121–30.

¹⁰⁶ Theophanes, 482, 489.

¹⁰⁷ Cf. *De cer.*, 1:668–69; the *roga* of the *tagmata* (officers and men) who took part in the Cretan campaign was as follows (average per capitum): 25.03 nomismata (Thrace); 25.07 nomismata (Macedonia); 29.89 nomismata (ἐξκούβιται and ἱκανάτοι). By way of contrast, the infantry officers and men of the theme of Harpezikion who fought in the same campaign received only 2.53 nomismata on average. The men of the maritime theme of Samos were paid an average per capitum of 6.24 nomismata.

too, would have been substantial and must have represented a considerable drain on the state treasury.

We have no information to allow us to assess the significance of the sum represented by the salaries paid to civilian employees, though we can assume that it was not particularly great since many of them were paid, wholly or in part (though generously, see above, p. 1009), by the citizens who used their services. These compulsory contributions in money or in kind were often proportional to the value of the issue under consideration; excesses were frequent, and the state was repeatedly compelled to attempt to stamp them out.

Our information about payment of the *roga* indicates that it was handed out once a year, despite the rigidity this created and the lengthy period for which large quantities of gold coin were destined to be immobile. We can be sure that the *roga* was paid once a year, for the entire year, in the case of senior officials and titleholders, for whom the receipt of the money from the hands of the emperor himself or his aide was of great symbolic significance and created a personal bond with authority. The *roga* of the themes was also paid in a single installment, in those years in which the soldiers were summoned to arms and inspected, a process called the *adnoumion*, which meant precisely “pay parade.” However, one can hypothesize—and it is no more than a hypothesis—that the *roga* of the mercenaries who were on long-term hire was paid in installments, perhaps on a monthly basis. What we do know for sure is that the men who were enlisted on a circumstantial basis, for a single campaign, and whose discipline could thus not be guaranteed, were paid by the month,¹⁰⁸ but of course this was done to ensure that they would remain at their posts throughout the campaign.

A further item of expense has to be mentioned with respect, primarily, to the army: the *philotimiai* (literally, “honor payments”), ceremonial distributions of money or silk cloth made by the emperor as additional incentives for his servants when a campaign was in the offing or when he wished to reward a distinguished act.¹⁰⁹ Although these handouts were undoubtedly of minor economic significance since they involved officers primarily, they took place at frequent intervals—now in one place, now in another—and consequently represented a regular item of state expenditure.

These “extraordinary” items of expenditure, which became regular because they were repeated in various parts of the empire, included ceremonial gifts from the emperor called *apokombia*, distributed among groups of officials on occasions such as the festivities of the Brumalia (at the winter solstice). There were predetermined tables for these payments, and each beneficiary received a sum in accordance with his rank on the basis of that paid to the person at the head of the list.¹¹⁰ The largest of the *apokombia* was that which the emperor paid into the coffers of the Great Church, for the patriarch and the clergy of Hagia Sophia.

Large sums to serve the purposes of imperial “propaganda” were spent on charitable

¹⁰⁸ E.g., the Mardaitai of the west. *De cer.*, 1:668.

¹⁰⁹ See, for example, *De cer.*, 1:471, 485–86.

¹¹⁰ Cf. Oikonomides, *Listes*, 225–31.

or learned institutions, public buildings, and public works (including fortifications). These state grants are frequently mentioned in founders' inscriptions as perpetual monuments to the emperor's generosity. However, we know little about how much they actually cost the state treasury. In any case, if we except direct gifts in cash, the *solemnia* ("gifts of majesty"), and the *logisima* (concessions to private individuals of taxable income, which was either not collected on their land or was paid to them in cash by the tax collector), most financing of this kind consisted of gifts of property or partial tax relief that permitted the beneficiaries to acquire income of their own by developing the land and contributing something to the state economy. In the case of public works, at least a part of the financing was obtained on the spot, in the form of *corvées* and special levies on the neighboring populations, which greatly reduced (if not altogether eliminated) the cost for the central state budget. In other cases, of course, impressive sums of money were spent, and the historians have harsh words for emperors who overspent on their foundations. The most striking example is the construction, by Constantine Monomachos, of the monastery of St. George Tropaiophoros at Mangana. We have no means of assessing the true cost of such expenditures.

Some large items of expenditure appear to be extraordinary when in fact they were not. One example is the cost of a military campaign. Strangely enough, the detailed accounts of two campaigns against Crete—those of 911 and 949—have survived.¹¹¹ The first involved the participation of 28,300 sailors and 6,037 cavalry and infantry troops. Although existing ships were used and the men were paid only for their mobilization, the whole operation cost 234,732 *nomismata*, more than a ton of gold. The campaign of 949 was less ambitious, costing only 127,122 *nomismata*. In both cases, contributions in kind had been levied on certain provinces; these met some of the needs of the expeditionary forces (foodstuffs, technical equipment, packhorses) and were not included in the accounts. The cost of the campaigns looks even more appalling when we remember that they were both miserable failures.

Since these were overseas campaigns, they may have been more costly because the fleet had to be used. Yet they were not the only campaigns waged in either 911 or 949, and it is inconceivable that in other years the fleet lay idle. There would probably have been some major military mobilization every year, some of them more local in nature, whether offensive or defensive. As a result, the apparently high cost of these campaigns should not be seen as such an unusual occurrence.

In the category of relatively regular items of state expenditure are the payments made abroad when the emperor wished to buy peace from a threatening neighbor or arrange military or diplomatic cooperation directed against an opponent. These payments have often been criticized as indications of weakness that sapped the strength of the state still further, though they should also be studied from the purely economic point of view, in terms of their cost/efficiency ratio.

We possess few reliable figures, given that such information was never publicized and that as a rule the chroniclers tend to exaggerate. There are some figures, however,

¹¹¹ *De cer.*, 1:651–78.

that seem unquestionable. When Theophanes is describing the humiliation of Emperor Nikephoros by Caliph Harun al-Rashid (805), he tells us that the Byzantine emperor (whom he profoundly disliked) undertook to pay the caliph 30,000 gold coins per annum for the state plus 3 nomismata as his own poll tax and a further three for his son Stavrakios.¹¹² It is clear that by this pact the Byzantines were compelled to accept a public humiliation much more painful than any financial loss would have been, yet the loss itself was not so terrible if we bear in mind that to have fought a major campaign against the caliphate (with very little chance of success, as things stood at that time) would have cost a great deal more.

As far as the tenth century is concerned, we know exactly how much an Italian noble was paid to suppress an anti-Byzantine rising with his own forces and to deliver the territory that had been in revolt into the hands of the *strategos* of Longobardia: 7,200 nomismata plus some silk cloth and valuable plate for himself and some more for his bishops and feudal lords.¹¹³ To fight a campaign overseas in Italy, even on a small scale, would have cost much more. There are other examples such as this.

State Gold Reserves

I do not believe that it is possible, with the figures at our disposal, to arrive at even an approximate estimate of the Byzantine budget. The attempts made in this direction have relied on sources—most of them Arab—of dubious reliability that flatly contradict the most reliable of the Byzantine sources. Moreover, these estimates call for so much arbitrary assumption and abstraction in reaching any kind of conclusion that even when apparently “reasonable” they are actually the product of the modern author’s will and of the various patterns and molds he has imposed on the medieval past—none of which has anything at all to do with the real data given by the sources.¹¹⁴

The only general figures we possess in connection with the magnitude of the Byzantine state economy are those that state the reserves of gold the various emperors passed on to their successors, and on the basis of which they were judged to have been successful or otherwise. Of course, many texts refer to the mythical wealth of the imperial treasury. In others, however, we are told that the emperor was forced to melt down precious plate or the jewelry of the palace and the churches and turn it into coin¹¹⁵ in order to pay the salaries or deal with a sudden and urgent threat to the defenses of the empire. If we consider the consequences this must have had for the morale of the population and the reaction it could (and did) trigger, especially where the assets of

¹¹² Theophanes, 482.

¹¹³ *De cer.*, 1:661–62.

¹¹⁴ Treadgold, *Byzantine State Finances*.

¹¹⁵ This is what Michael III, who had squandered the wealth of the empire, was said to have done not long before 867 (*Theophanes Continuatus*, 173). However, the information is questionable, coming as it does from historians who constantly criticize Michael III in order to praise and justify his successor (and assassin), Basil I.

the church were concerned,¹¹⁶ then it has to be assumed that the imperial coffers at that time were empty, or more or less so.

Incidents of this kind are also important in another respect. There can be no doubt that in a medieval economy the dedication by the emperor of valuable vessels in churches, the ornamentation of chambers in the palace with precious items, and the manufacturing of large numbers of thrones, crowns, and scepters not only served propaganda purposes but were also a way of setting resources aside for an hour of need.

We possess some figures. Although we do not know how far we can trust them, I shall discuss them since they reflect what the Byzantines believed the cash reserves of the state to be. We are told, for instance, that when Emperor Theophilos died in 842 he left 6,984,000 nomismata (97,000 litrai) in the imperial treasury called the *phylax*, and that his widow Theodora, who was regent until 856, added a further 3,000 litrai of gold to the reserves during that period, thus bequeathing 7,200,000 nomismata to her son Michael III.¹¹⁷ There is also another account that gives a completely different figure for the gold reserves in 856: 7,848,000 nomismata or 109,000 litrai of gold,¹¹⁸ which means that Theodora had added 12,000 litrai or 864,000 nomismata to the original sum. We do not know which of the two figures is closer to the actual sum. Over a period of fourteen years, the first figure predicates a mean annual increase in the imperial funds of 3.24%, while the second calls for 8.83%. Both are possible. What is not possible is to say whether either figure reflects a corresponding growth in the economy in general. Such sums must, however, indicate that the state economy was in a healthy condition.

These reserves were said to have been squandered by Michael III, so that in 867 Basil I found only 300 litrai of gold (21,600 nomismata) in the treasury, being compelled to melt down the palace jewelry to mint coins in order to pay salaries. These accusations against Michael III are, however, highly unreliable.¹¹⁹

We next find corresponding figures almost two centuries later. When Basil II died in 1025, he left 200,000 litrai of gold (approximately 14,400,000 nomismata) in the imperial treasury.¹²⁰ According to Psellos, most of this was loot that Basil had accumu-

¹¹⁶ The most familiar confiscations of portable ecclesiastical vessels are those that took place under Emperor Herakleios in 622 (Theophanes, 1:302–3); Michael VII in 1071–79 (*Michaelis Attaliothae Historia*, ed. I. Bekker [Bonn, 1853], 260 [hereafter Attaleiates]); and, above all, Alexios Komnenos in 1082, which provoked the schism of Leo, metropolitan of Chalcedon.

¹¹⁷ *Theophanes Continuatus*, 253; cf. Morrisson, "Byzantine Money," 941ff.

¹¹⁸ *Theophanes Continuatus*, 172; *Iosephi Genesii Regum libri quattuor*, ed. A. Lesemüller-Werner and I. Thurn (Berlin, 1978), 11. It should be noted that in making his calculations Treadgold (*Byzantine State Finances*) misinterpreted the sources, taking the phrase as meaning that the balance was 1,900 kentenaria, not 1,090 as the source actually states, and calculating the sum Theodora left as the enormous figure of 13,680,000 nomismata. He then considers this figure to be more reliable and bases all his further calculations upon it. The errors into which one can be led by a misreading of this kind are only too obvious.

¹¹⁹ *Theophanes Continuatus*, 173; cf. note 115 above.

¹²⁰ *Michael Psellos, Chronographie*, ed. E. Renauld, 2 vols. (Paris, 1926–28), 1:19; Zonaras, 3:561–62.

lated on his campaigns, especially in the East (and we know that in the less monetized Bulgarian state the tsar's treasury did not contain more than 720,000 nomismata, all of which was shared out as the *roga* of the Byzantine army).¹²¹ Some also came from the confiscated assets of various nobles, especially those who had rebelled against Basil. However, it is surprising to find that an emperor who campaigned so frequently had managed to amass a sum of this size, which can only be interpreted as the outcome of stringent economies and the reduction of state expenditure on everything save military spending. It has to be added here that Basil II was not insistent on the strict collection of taxes from the small landowners of the empire.

In the first half of the eleventh century, we find other instances of large sums being set aside as savings. It is said that when Patriarch Alexios Stoudites died in 1043 he left a fortune of 2,500 litrai of gold (180,000 nomismata), and in 1038 Theophanes, metropolitan of Thessalonike, had amassed a fortune of 3,300 litrai (237,600 nomismata).¹²² Both these reports may be exaggerated, but the sums were seen as scandalous at the time, and the money was confiscated. Similar instances allow one to conclude that sufficient cash was in circulation to allow the hoarding of large sums without creating any problem for the functioning of the state economy. One can also conclude that the current state finances probably showed a surplus from one year to the next—a point as applicable for the tenth and eleventh centuries, with their major military successes and the increased revenue from spoils of war and confiscations, as it was for the ninth.

An Overview of the System

For all the observations made above, it has to be remembered that the gold nomisma was not something to which citizens in low-income brackets had easy access. However, since it was an absolutely essential means of exchange, especially where payments of tax were concerned, it had to be sought out, and so the nomisma tended to have a rather higher value as a result of the difficulty of acquiring it. Consequently, those who were in a position to obtain and dispose of nomismata easily were in a relatively privileged position.

It is to be concluded that the system of command economy that I have described had certain significant effects on society. While the state was mainly responsible for putting currency into circulation and the minting of coins was carefully controlled, money was actually distributed to the public primarily through the *roga* and other items of state expenditure, and consequently the number of primary recipients was small. The beneficiaries of the *roga* were, first and foremost, the members of the aristocracy, who held the titles of honor and usually occupied the senior positions in the state administration. This tended to create a client relationship between the emperor and the aristocrat/state official, who collected his *roga* from the imperial hand. Part of

¹²¹ Skylitzes, 359.

¹²² Ibid., 402, 429.

this money was then spent on consumer commodities, but another significant portion of it filtered down to the subordinates of the official who had received the *roga*, thus creating an economic pyramid that was the nucleus of important social developments. Of course, in line with tradition, everything was kept under the direct control of the emperor, and salaries were granted for a limited period of time: at the very most, the life span of the beneficiary.

In the provinces, where the base of the agricultural economy was located, it can be presumed that any individual who possessed cash—and especially gold—would be in a position of some influence. This would be the case, first and foremost, for the aristocracy, but it would also apply to the military, who themselves collected a *roga* from time to time. Little by little, the gold coins would trickle down to the primary producers, after which they would be collected again and returned to the state in the form of tax. Despite the poverty of our information, it seems that the procedure the state imposed with regard to the circulation of money functioned smoothly, since there was enough cash to safeguard the operation of the *roga*/tax system, meet the everyday needs of trade, and even permit the hoarding of considerable treasures.

The Crisis of the Eleventh Century and the Collapse of the System

During the eleventh century, Byzantium passed through an acute economic and social crisis that, in conjunction with the political and military problems that had arisen on every front, brought the state to the edge of complete disaster. The situation was saved by the ascent to the throne of the Komnenoi, but the Byzantium of the twelfth century was very different from what it had been in the eleventh.

Where the state economy is concerned, the most striking and easily measurable manifestation of the crisis was the debasement of the nomisma, which obviously reflected a shortage of gold. Although it seems that gold was regularly imported into Byzantium during the eleventh century, needs were clearly growing more rapidly than supply, and it proved impossible to prevent an avalanche of economic problems.

The gold shortage may have appeared for the first time in the reign of Nikephoros II Phokas (963–969), who first minted a lighter gold coin, the tetarteron, using this, as Skylitzes tells us, for payments, while the civil servants who collected taxes insisted on payments being made in the old coin of full weight.¹²³ This measure has been interpreted in a number of ways, but it could be seen as an attempt to increase the number of coins in circulation without also increasing the quantity of gold. The innovation may have caused problems, but it did not bring about any change in the situation, since the reduction in weight was obvious and the tetarteron was not accepted as being of the same value as the histamenon of full weight, even though Nikephoros tried to legislate to the effect that his coinage ought to be preferred to that of his predecessors. This attempt to introduce a fiduciary currency failed, and the tetarteron survived as a coin

¹²³ Ibid., 275. Cf. Morrisson, “Byzantine Money,” 930, and Laiou, “Exchange and Trade,” 734.

of lower value. However, it has to be admitted that this is not the only possible interpretation of the tetarteron.

The problems in the gold coinage reappeared in the eleventh century, in a different manner. Now the nomisma was debased by reducing its gold content, though without changing its weight. Analysis of these coins has shown that the first and insignificant devaluation probably occurred under Michael IV the Paphlagonian (1034–41). Further devaluations were restrained, and by the time of Romanos Diogenes (1068–71) the nomisma, whose gold content was originally more than 22 carats, was down to 18 or slightly less. After this, however, the gold content dropped dramatically: from 16 carats to 10 under Michael Doukas (1071–78) and then to 8 carats—one-third of its original value—in the reign of Nikephoros III Botaneiates (1078–81).

According to Cécile Morrisson,¹²⁴ what we have during the first phase—to the end of the 1060s—is a deliberate devaluation for the purposes of development, decided upon because the volume of trade had increased much more rapidly than the quantity of gold available. A similar phenomenon occurred in Italy at about the same time. Sure enough, there was no significant reaction to this devaluation in Byzantium. In the 1070s, on the other hand, we have crisis devaluation and the collapse of the entire middle Byzantine monetary system, sweeping away with it the fiscal and tax systems as well.

Morrisson's theory has been questioned by M. Hendy,¹²⁵ who believes the crisis is one and the same from the start and that the only change was in the severity of the problems that appeared. However this may be, it is certain that around 1071—that is, in the wake of the battle of Mantzikert and the loss of Asia Minor—we have a crisis far more acute than any that had gone before. Consequently, I shall examine the eleventh century by drawing a dividing line at 1071—a line that no one calls into question, regardless of his or her understanding of the crisis. For my part, I agree with Morrisson's position, and this statement will affect the account I give below.

Among the other phenomena of the eleventh century, which may be indicative of a shortage of cash but also reveal confidence in the state economy, are a rise in interest rates and a corresponding reduction in the yield of the *roga* on honorary titles. Both phenomena are reported in the *Peira* of Eustathios Rhomaïos, a text certainly written before 1045. The average interest rate for loans in cash rose from 6% to 8.33%, and other interest rates followed proportionally.¹²⁶ Given that this phenomenon occurred before the devaluation of the nomisma had really got under way (interest rates may have begun to rise, and probably did, some decades before 1042), it could be seen as an indication of a shortage of cash, or of increased demand for it. At about the same period—indeed, in the same text—we are told that the annual *roga* of those appointed

¹²⁴ C. Morrisson, "La dévaluation de la monnaie byzantine au XI siècle: Essai d'interprétation," *TM* 6 (1976): 3–48; cf. Lemerle, *Cinq études*, 285, 307; cf. Morrisson, "Byzantine Money," 944.

¹²⁵ Hendy, *Studies*, 236.

¹²⁶ A. E. Laiou, "God and Mammon: Credit, Trade, Profit and the Canonists," in *Byzantium in the 12th Century: Canon Law, State and Society*, ed. N. Oikonomides (Athens, 1991), 266–85.

to honorary posts by the state became less profitable. In the tenth century the “price” at which officials could purchase supplementary state *roga* (see above, p. 1002) produced an annual yield corresponding to 9.72% of the capital invested, but in the early decades of the eleventh century the return had dropped to 8.33%.¹²⁷ Clearly, the demand for titles had increased, and confidence in the state economy—which guaranteed the entire system—was unshaken, if not actually increased. The state, exploiting this confidence and the great attraction of the titles of honor, was able to improve the performance of the entire system. Indeed, there was such trust in the system that it seems to have been unaffected even by the temporary diminution of the *roga* imposed by Isaac I Komnenos (1057–59).

Imperial policy toward the *roga* accompanying offices demonstrates that the state was attempting to use the system to attract the savings of certain sectors of society. Constantine IX Monomachos (1042–55) “opened up the senate,” that is, he permitted a new social group (whom P. Lemerle identifies with the administrative employees of Constantinople) to acquire honorary posts and the *roga* they carried by their initial investment. Similar measures were taken by Constantine X Doukas (1059–67), who according to Lemerle made the merchants and manufacturers of the capital eligible for membership in the senate.¹²⁸ In both cases, these were new forces in society, forces that while on the ascendant economically had been excluded from the (largely land-owning) aristocracy for reasons of tradition and that in a developing economy were earning large sums of money (and thus might have considerable savings) derived from their participation in the administration or in the economy of exchange. These moves to open up the senate thus had obvious social effects on the formation of a new aristocracy and were intended to reinforce the state treasury with revenue from new domestic sources.

The system of the *roga* for offices operated until the 1070s, when the great economic crisis took place and when the currency was forcibly debased. As part of a policy of pandering to the masses, Nikephoros III Botaneiates handed out so many offices without collecting their “price” that the system’s expenditure outstripped its revenue. Payment of the *roga* was first transferred from the *sekretion* of the *eidikon* to the general state budget (in 1079 it was paid by the *sakellarios*¹²⁹) and then stopped altogether. The system was bankrupt. Not long afterwards, Alexios I Komnenos (1081) abolished the traditional *roga* of those who held honorary posts.

The state’s thirst for gold can be discerned behind a series of fiscal measures and

¹²⁷ *Peira*, Zepos, *Jus*, 4:38, 74 (hereafter *Peira*). Cf. Lemerle, “Roga,” 89–90. There was a similar change in the price of the official posts. In the 10th century, anyone who wished to become a *protospatharios* would have had to pay 18 litrai of gold: 6 to become a *spatharokandidatos* and a further 12 to rise to the rank of *protospatharios*, or alternatively 18 litrai if he wished to move directly to the post of *protospatharios*: *De cer.*, 1:692. In the 11th century, the price of the post of *protospatharios* rose to 20 litrai. Sathas, *MB*, 5:210; cf. Lemerle, “Roga,” 84–88).

¹²⁸ Lemerle, *Cinq études*, 287ff; cf. G. Dagron, “The Urban Economy, Seventh–Twelfth Centuries,” *EHB* 415–16; Laiou, “Exchange and Trade,” 753.

¹²⁹ Zepos, *Jus*, 1:643.

practices. Under Michael IV (1034–41), the sources hurl various accusations at the fiscal policy that had been implemented by the emperor's kinsman John the Orphanotrophos. He had attempted, for the first time, to collect in cash the tax paid by the inhabitants of Bulgaria. After conquering that less economically developed area, Basil II had allowed the people to retain the system of taxation in kind that had existed since the time of Tsar Samuel: each villager *zeugaratos* paid in tax only one modios of wheat, one modios of millet, and one jar of wine. The Orphanotrophos demanded that taxation in gold nomismata be imposed, as was the practice in the rest of the empire, and this led to the great rising of Deljan.¹³⁰

The sources have much more serious charges to make in relation to what happened in the rest of the empire. The Orphanotrophos “devised all possible ways of committing injustices” in that he sold administrative positions and gave his employees freedom to tax the country people as they pleased (since there was no control over them) and because there was an increase in the lump-sum demands for secondary taxes and in the conversion of corvées into cash payments. This amounted to large-scale tax farming, an administrative technique familiar from earlier times but never before applied on such a scale, which created difficulties because of the high-handedness for which it left ample scope. These irregularities involved not so much the land tax, which was predetermined and difficult to change (as long as the monetary system remained stable), as the secondary taxes and the corvées, which were collected circumstantially as need arose and which the tax farmers tended to demand more and more often for their own personal profit, without any restraint being exercised by the central administration.

The burden represented by special corvées and services was made still greater by the fact that they could be bought out for cash. The buying out of services to the state is a phenomenon of which we know from ancient times. After the middle of the tenth century, it became more and more common for the obligation of military service (the *strateia*) to be bought out, not only by those who really were unable to provide the service but also by those who were unwilling to undergo the hardships of a campaign. Furthermore, in the tenth century—and even more so in the eleventh—the state favored the process of buying out military service and even imposed it in areas far from the front line, so that it could obtain the cash with which to hire mercenaries, who were much more efficient soldiers. This trend culminated when in order to obtain cash Constantine IX Monomachos made it compulsory to buy out the military obligation in the theme of Iberia, thus significantly weakening the defenses of the eastern borders.¹³¹

The buying out of military service (or more accurately, the replacement of an obligation in kind by one in cash) also extended to other areas. The Orphanotrophos demanded that the *aerikon*, which had formerly involved the concession of domestic animals to the state for the needs of the army, be paid in cash.¹³² These, however, were measures of a general nature and consequently capable of being controlled. But the system was capable of becoming extremely onerous when the tax collector was not

¹³⁰ Skylitzes, 412.

¹³¹ Ibid., 476.

¹³² Ibid., 404.

subject to control from above, since he was then in a position to demand special contributions and, above all, services that were actually unnecessary for the purpose for which they were collected or were used only marginally (or not at all) for that purpose. This applied in particular to services such as the construction of fortifications or roads, which could be converted into cash payments.

The measures of John the Orphanotrophos, despite the charges brought against them by historians, became the rule throughout the eleventh century, presumably because they responded to a given situation and allowed the state to deal with its immediate financial problems. Continuing to apply the practice inaugurated by Basil II, the state constantly strove to increase its land assets, retaining klasmatic land for itself, and setting up, both in the old imperial lands and in the territories recently conquered, units for agricultural production (*kouratoriai*, *episkepseis*). These gave the state revenue in cash and kind and could also be conceded for operation by private citizens, who would behave as if they owned the land, without any control beyond the obligations they had undertaken when leasing it.

The new practices introduced by John the Orphanotrophos were kept up throughout the eleventh century and had a number of important side effects apart from marginalizing the *roga* system and replacing it to a significant extent with the renting out of the state's financial services.

The state (or rather, whoever represented it in the provinces) was able to achieve significant economies at the expense of the citizens and the services it provided them. A *doux* of Ani in Armenia, for instance, was appointed under Constantine X on the condition that he would receive no salary whatsoever, and since his objective, as was only to be expected, was to enrich himself, he reduced the amount of money that the state had previously spent in the area. As a result, Attaleiates tells us, the administration and the army disintegrated in the area, which thus undefended could do nothing to withstand the Turkish assault.¹³³

It is commonly believed that in order to become rich one had to have leased some part of the state economy. Kekaumenos confirms the general conviction that the largest houses in Constantinople belonged to those who had undertaken the management of the public finances. He also relates the case of a man who undertook to manage an imperial estate—the *episkepsis* of Arabissos—and who within a few years had accumulated a deficit of 60 litrai of gold.¹³⁴ However badly this entrepreneur managed the estate and however thoughtlessly he had acted in getting so heavily into debt, the agricultural enterprise must have been a huge one, and if it could run up a deficit of 60 litrai of gold, it must have had an enormous turnover.¹³⁵ Moreover, if we compare this figure with the 40 litrai of gold that was the annual *roga* of the *strategos* of the Anatoli-

¹³³ Attaleiates, 80.

¹³⁴ *Sovety i rasskazy Kekavmena*, ed. G. Littravin (Moscow, 1972), 196 (hereafter Kekaumenos).

¹³⁵ If we take the word of Boilas that an estate worth 1,440 nomismata could yield an annual income of 50 nomismata, then we have to hypothesize that it would take an estate worth 124,416 nomismata to produce annual income, far less a deficit, of 4,320 nomismata (60 litrai). Although here we are dealing with a deficit that accumulated over a number of years, it is clear that the Arabissos *episkepsis* must have been a huge agricultural undertaking.

kon, we can see that by the eleventh century the levels of the state economy were completely different.

The tax burden did not simply increase: it also became impossible to predict and potentially impossible to bear. Those who were able to do so strove to exempt themselves and their villagers from the extraordinary taxation that was the unforeseeable factor. This was the reason behind the development, in the eleventh century, of the privilege called the *exkoussia*, which constituted protection against secondary taxes and corvées, though not affecting obligations under the land tax. This protection also extended to dependent villagers—the *paroikoi* of the privileged estate—who in fact did manage to use it to escape some of the extraordinary fiscal obligations. This enabled the landowner who held an *exkoussia* to offer better terms of employment to his tenants, and he could thus attract to his estate the workforce he wanted.¹³⁶

To the extent to which privileges of this sort were multiplying and, of course, always tended to favor secular or ecclesiastical potentates, the burden of tax tended to be transferred to the shoulders of small farmers who were unable to obtain similar privileges. In the provinces, taxes were collected by tax farmers, who were entrepreneurs on the large scale and who then sublet their rights to smaller tax farmers and *paktonarioi*; they rendered to their masters what they had been able to extract from the poor—gaining in sin as the *archontes* gained in money, to borrow a description from Kekaumenos.¹³⁷

This informal but significant increase in the fiscal burden for small farmers—an increase that was inevitable when taxes were collected by tax farmers—led the victims to seek protection with privileged large landowners, whose *paroikoi* they became. This completed the vicious circle by which the number of citizens subject to full taxation dropped and so, ultimately, there was a reduction in the revenue of the state.

Thanks to the privileges, the large estates flourished and paid less tax. As a result, part of the public wealth was transferred, little by little, to the secular and ecclesiastical landowners, who also benefited from direct imperial grants such as the *roga* and the *solemnion* (an annual payment made chiefly to ecclesiastical foundations; when it came from the royal treasury it was always in cash, while when it came from the local tax collector it might sometimes be in cash and sometimes in kind). These grants were, however, the continuation of a tradition, and over the passage of time they became less important because they were replaced by concessions of land and tax exemption.

The granting of privileges and the concessions of state revenue to private citizens led to the emergence of a group of people in the service of the state who received from it an income they did not collect in cash, as had been the case with the *roga*. In this way, the use of cash in the collection of taxes and in the payment of services to the state, although existing to the end of the empire, became more limited in magnitude; this, in turn, permitted the development of initiative where the concentration of surplus agricultural produce was concerned and in connection with the level and the time

¹³⁶ See Oikonomides, *Fiscalité*, 211ff.

¹³⁷ Kekaumenos, 238.

at which it would be converted into merchandise, that is, into cash. The outcome was a significant reduction in the extent to which the state economy was monetized.

The situation entered a period of great and profound crisis in the 1070s. At a time when Byzantium was having to come to terms with crippling defeats on the battlefield, and in the very same year—1071—in which it lost Bari, its last toehold in Italy, while the defeat at Mantzikert left the way into Asia Minor open for the Turks, the Byzantine economy was collapsing in ruins. The nomisma had been debased to one-third of its original and nominal value, and the system of official posts and the *roga* had gone bankrupt. There was an imbalance between the debased gold coin and the silver and copper coins, which had not followed it in its devaluation. This created problems that were hard to solve and brought about basic changes in the public economy, causing the collapse of the tax system. The signs of crisis lasted for some years, until the reforms of Alexios I Komnenos rectified the situation.

One can observe that the land tax, which had traditionally been collected in cash in accordance with the system I have described, lost its importance and was marginalized by comparison with secondary and special taxes and levies. The most extreme example of this state of affairs is known to us from a document of the monastery of Vatopedi: in 1082, we find that the monastery's two estates paid 19 nomismata in land tax. This sum ought to have been the principal tax burden on the land in question, under the system I have described above, which was—theoretically—still in force in 1082. But the document also tells us that the local judge was demanding a further 20 nomismata as his *antikaniskion*, that is, to buy out the supplementary (and probably insignificant) charge called the *kaniskion*, which was usually paid in kind.¹³⁸ In other words, the extraordinary and “marginal” charge had reached the point of being greater than the main tax. This simply means that the land tax, in debased coinage, was now of marginal economic interest, while the extraordinary taxation (in kind, which of course could not be debased) had become a major source of revenue for the state and especially for its employees.

In 1104/5, a certain Demetrios Kamateros presented himself and undertook the task of doubling the *akrostichon*, that is, the total sum of land tax collected, in the themes of Macedonia and Thrace. In order to achieve what seems at first sight impossible, he must have counted on benefiting from the imbalance between the gold and silver coinage, collecting the tax in silver and rendering it to the state in devalued gold so as to enable himself to meet his obligations and make a handsome profit. He failed, however, because the powerful men of the themes in question forestalled him by paying their taxes directly into the treasury in Constantinople, presumably in the debased gold coinage.¹³⁹

These may appear to have been marginal and extreme cases, but that was very probably not so. The *Logarike* makes much of the importance of the “lesser digits,” that

¹³⁸ EEBΣ 3 (1926). For the *kaniskion*, which had formerly been an insignificant contribution (1 loaf of bread, 1 chicken, 4 liters of wine and 12 kg of wheat), see above, p. 998.

¹³⁹ Zepos, *Jus*, 1:334.

is, of the fractions of the nomisma that were paid in copper, as opposed to the whole nomismata that were paid in debased gold coin. There was an undeniable need for radical treatment of the whole unhealthy system.

The State Economy of Privileges (12th–15th Centuries)

This period, in which defects were set to right and a new beginning was made, is notable for the widespread granting of privileges, which ceased to be an extraordinary measure and became a regular fiscal instrument applied to the subjects of the empire and to foreigners alike. At this time, privileges were of a clearly personal nature, and thus the granting of them had certain inevitable social consequences since it involved the special treatment of the beneficiary.

Privileges also led to the partial demonetization of the state economy, given that there was now no obligation upon the holders of privileges to pay tax, and still less to pay it in cash. In this way, large sums of money were liberated from the public economy; in earlier times, these sums had kept to the slow pace of the public accounting system or had moved only slightly, being paid out as *roga* and repaid as tax, for most of the year. Now these sums were available, and they were used by the free economy of exchange that predominated in the late medieval period. The state ceased to be the most important motive power behind the circulation of money. To put it another way, the partial demonetization of the state economy helped to improve the infusion of cash into the economy of exchange and, of course, made it possible for money to circulate much more rapidly. Another feature of the period was the way in which foreigners—and Italians in particular—came to play a basic role in the Byzantine economy (including the state sector), since Byzantium had now become part of the much broader open economy that marked the end of the medieval period.

In the closing centuries of the Byzantine Empire, the state economy was decentralized and many of its bureaucratic processes were simplified, with public revenue being farmed out more and more often. The period is easy to divide into two sections. In the first part, corresponding roughly to the twelfth and thirteenth centuries, the state was powerful, and despite the crises of 1081–91 and of 1204 it recovered quickly and soon restored the fiscal system in accordance with its traditional centralized principles. Consequently, it was able to maintain strict control over the privileges it conceded.

In the second subdivision, covering the fourteenth and fifteenth centuries, the state grew constantly weaker and had difficulty in maintaining its traditional centralism. It was unable in reality to impose its will on those to whom—of its own free will or by coercion—it granted privileges or a status of semi-independence. Privileges ceased to be a fiscal instrument and tended to become factors in the dissolution of the state.

Administrative Structures

The financial services of the state were simplified to a greater extent than the remainder of the administration in an empire that, already in the twelfth century, was consid-

erably smaller than it had been in the eleventh; the distribution of privileges in the form of rewards for services reduced in scope and substantially simplified the range of what the state economy was in a position to involve itself in.

The state retained, and was to retain until the end,¹⁴⁰ the right to determine the tax for which each taxpayer was liable. As during the previous period, this was the task of the *anagrapheus/apographeus* (see below), an employee who visited each province at regular, though long, intervals, every fifteen or thirty years. This process of surveying (*anagraphe/apographe*) could be an exceptionally profitable activity for those engaged in it, and as a result it often came into the hands of high officials in the provincial administration, who were accompanied, when necessary, by a professional surveyor. The objectives of the procedure, as we are told clearly in the Palaiologan period, were the census (*apographe*), the *exisosis* (confirmation that the tax due corresponded to the land held by the taxpayer), the *apokatastasis* (the addition or subtraction of land from the records, as appropriate), and ultimately the *paradosis* (the issuing of the official document ratifying the holding of land by the taxpayer). The ultimate product of the survey was the issuing of a *praktikon* for the landowner, describing the borders of the land he owned, with its tax, and possibly a list of his *paroikoi* with the tax for which each of them was liable.

The state economy was represented in the provinces by the *pratton* or *energon/dienergon tas douleias tou demosiou* ("he who carries out the business of state"), an individual (assisted by others) who had undertaken the management of all the rights held by the state in a specific area or city; the size of the fiscal unit would depend on the agreement reached between this individual and the state. Initially referred to as the *praktor* and later, in the time of the Palaiologoi, usually as the *enochos* ("person responsible"), this person was in charge, in principle, of a province or *katepanikion*. As a rule, his term of service lasted a given period, and he might act εἴτε ἐπὶ πάκτῳ εἴτε εἰς τὸ πιστόν, that is, either by leasing the management of the state's rights, which involved winning an auction and being obliged to render to the state treasury the sum agreed upon and keeping for himself whatever surplus might be collected, or undertaking such management on the obligation to render to the state the revenue determined by the inventory minus his own fee, which was certainly not a *roga* and probably constituted a percentage of the takings. The former system clearly involved risks for the contractor but left scope for very much greater profits, whereas the second was safer but more limited in its opportunities. The *epi pakto* system was more onerous for the taxpayer than was the other, and it often resulted from the corruption that was a feature of the provincial administration, especially in the time of the Palaiologoi. As was to be expected, the *praktor's* profitable duties were often discharged by the *doux*, the commander of the province.¹⁴¹

Under both systems, and regardless of the title by which the state's agent might be

¹⁴⁰ For the period of the Palaiologoi, see L. Maksimović, *The Byzantine Provincial Administration under the Palaiologoi* (Amsterdam, 1988).

¹⁴¹ G. Ferrari, "Formulari notarili inediti dell'età bizantina," *BISI* 33 (1912): 32, no. 8.

known, he would have the support (or would have to deal with the competition) of the other employees sent out from Constantinople on special missions, such as that of handing out *pronoiai* when large numbers of new soldiers were to be settled in the area.¹⁴² In some cases, the state conceded to others the collection of some of its revenue, such as the tithe on the output of publicly owned estates.¹⁴³ The *praktor* was also obliged to honor the receipts issued by other state departments, especially in Constantinople, to taxpayers who had paid some debt to the state directly to those departments¹⁴⁴—and he could be sure that the central services would later put the sum in question down to his own account. Such receipts were also issued by those who enjoyed tax exemption and consequently did not pay him the sum recorded in the tax ledger.¹⁴⁵

It follows that under the receipt system the *praktor* was also responsible for the payments the state was due to make in his area. Not for all such payments: the commanders (*kephalai*) of the towns, for example, and a number of other state employees were entitled to collect their fees directly from the taxpayers (the *dikaia tou kephalatikiou*), which did not pass through the hands of the *praktor*.¹⁴⁶ Military and other employees also had the right to collect special taxation or corvées, and these went beyond the jurisdiction of the *praktor*.

Understandably, when he possessed such powers the provincial tax collector was obliged to concede the exercise of some of them to others, even to the village priests, who would undertake to collect the taxes of the community and pass them on to the tax collector.¹⁴⁷ On the other hand, his authority over the finances of state was limited by the large number of holders of privileges who might live in his area, by the intervention of the state in special circumstances, and by the traditional rights other state employees or officers might enjoy to collect money on their own account.

The central financial services of the state underwent still greater simplification. We have seen¹⁴⁸ that the great departments of the tenth and eleventh centuries declined; subsequently, during the twelfth century, terms such as the *sakellarios*, the *sakelliou*, the *logothetes* of the *eidikon*, the *grand kourator*, the *kourator* of Eleftheriou, and the *kourator* of Mangana disappear from the sources. The officials in charge of other fiscal services kept their titles, but there were now no responsibilities attached to the post, and the title was merely honorific. The text of Pseudo-Kodinos (14th century) notes that the following posts have no departments attached to them or that the services they provide are unknown: the *logothetes* of the *genikon* (who is said to have retained some responsibilities until the late 12th century), the *logothetes* of the *stratitikon* (who lost his responsi-

¹⁴² *Lavra*, 1: no. 65: παραδόσεις κομανικῶν προνοιῶν.

¹⁴³ Sathas, *MB*, 6:645, 647.

¹⁴⁴ N. Svoronos, "Notes à propos d'un procédé de techniques fiscales: La ΔΟΧΗ," *REB* 24 (1966): 97–106.

¹⁴⁵ Sathas, *MB*, 6:627–28.

¹⁴⁶ *Ibid.*, 6:642–43.

¹⁴⁷ Ferrari, *Formulari notarili*, no. 15.

¹⁴⁸ See above, 1026–27. For the discussion that follows, see the corresponding entries in the *ODB*; cf. P. Magdalino, *The Empire of Manuel I Komnenos, 1143–1180* (Cambridge, 1993), 229ff, and M. Angold, *A Byzantine Government in Exile: Government and Society under the Laskarids of Nicaea, 1204–1261* (Oxford, 1975), 204–7.

bilities once the *strateia* became monetized), the *logothetes* of the *dromos* (a post that for many years remained senior, though it had no fiscal responsibilities), the *logothetes ton agelon*, the *logothetes ton oikeiakon* (whose responsibilities were more general in the 12th century), and the *megas logariastes*.¹⁴⁹ The *logothetes* of the *sekreta*, a post that appeared in 1081, was undoubtedly a high-ranking official, but his duties appear to have been largely administrative rather than fiscal.¹⁵⁰ Only the *vestiarion* remained powerful, becoming the imperial treasury par excellence after the late twelfth century. In the fourteenth century, it was controlled by the *prokathemenos* of the *vestiarion*, whose job it was to look after “the revenue and expenditure.”¹⁵¹

The vast administrative edifice of the Macedonian emperors no longer existed. It had been scattered into the provinces, each of which now had its own local administration, its own revenue, and its own expenditure. All that was left in the center was a treasury that collected such surplus as there was from the provinces and paid, on the emperor's behalf, those who were not remunerated in any other way. There was also a central administration that attempted to control the management of the various provinces and financial departments through the system of the census and by establishing duties on trade on behalf of the emperor. Everything had become much smaller and much simpler.

To conclude, let us look briefly at the state departments that were involved with shipping and thus with the comings and goings of the trade taking place on a large scale in the harbor of Constantinople. The history of these departments is characteristic of that of the state economy in general. From the late ninth to the eleventh century, the *parathalassites*, an official subordinate to the eparch of the city, exercised judicial (and, I hypothesize, administrative) control over the ships and their sailors. In the second half of the eleventh century, we find ships within the jurisdiction of the *sakellarios*, indicating that they had become a source of income for the state. In the twelfth century, the *sekretion* “of the sea” makes its appearance; it dealt specifically with measurement of the capacity of ships and with taxation on them, under the supervision of the *megas logariastes* of the *sekreta*, working with the *parathalassites* (there were two of them by this time) and with the staff of the *sakellarios*.¹⁵² However, it is interesting to note that by the late twelfth century the revenue from the *sekretion* of the sea had been transferred to the grand *doux* of the fleet (the chief admiral), and that its employees performed their duties by concession from him (οἱ ἐνεργούντες τὰς τῆς θαλάσσης δουλείας δικαίῳ τοῦ . . . μεγάλου δουκός). In other words, it is clear that what had been an administrative and judicial institution acquired fiscal interest and that ultimately the revenue from it ended up in the hands of a senior official.

¹⁴⁹ Ps.-Kodinos, *Traité des Offices*, ed. J. Verpeaux (Paris, 1966), 176, 178, 182, 184 (hereafter Ps.-Kodinos).

¹⁵⁰ R. Guiland, “Etudes d'histoire administrative de l'empire byzantin: Les logothètes,” *REB* 29 (1971): 75–84.

¹⁵¹ Ps.-Kodinos, 186.

¹⁵² See H. Ahrweiler, “Fonctionnaires et bureaux maritimes à Byzance,” *REB* 19 (1961): 249–52; P. Lemerle, “Notes sur l'administration byzantine à la veille de la IVe croisade d'après deux documents inédits des archives de Lavra,” *REB* 19 (1961): 258–72.

The State and the Farmer

Under the Komnenoi The crisis of the eleventh century and the dramatic devaluation of the nomisma brought about an imbalance in the monetary system, since the silver and copper coinage was not devalued to the same extent. On the other hand, the *charagma* system led inevitably to the collection of tax in (debased) gold coinage, while the same sums might have been worth many times more if they had been collected in silver or copper. This lack of balance and the frequently high-handed action taken by tax collectors as they strove to benefit from the situation led to excesses such as the attempt of Demetrios Kamateros to double the tax revenue of Thrace and Macedonia in 1104/5. This was the point from which the tax and monetary reforms of Alexios I Komnenos set out, reaching their complete and final form, after some experimentation, in 1109.

The foundation of the new system¹⁵³ was the collection of the tax/*charagma* in *trachea aspra*, that is, in new coins that had a low gold content. In calculating fractions and accretions, each trachy was taken as equal to 4 miliaresia (96 folleis). In other words, we now have a coinage that was officially devalued by comparison with both the old gold nomisma and the new hyperpyron, the pure gold coin minted by Alexios himself but not used for the purposes of taxation. Fractions of the trachy were collected in copper folleis, 24 of which were theoretically equal to a miliaresion. The accretions (that is, *dikeraton* + *hexafollon*, *synetheia* + *elatikon*) were collected as a lump sum, at the rate of 33 folleis to each trachy aspron coin. Under this system, the sums collected in folleis—that is, the fractions of the main tax and the accretions on it¹⁵⁴—were extremely onerous for the taxpayer, and to the modern mind this seems an absurd arrangement. However, it did allow the Komnenian administration to collect fiscal revenue that was always equal to what it had been, sometimes exceeded the former level slightly, and occasionally exceeded it to a considerable extent despite the devaluation of the coinage and the apparent reduction in the importance attached to tax revenue. The use of the devalued gold coinage and the shift in the main weight of taxation to the silver and, in particular, the copper coins constituted a response to the shortage of gold created by the spectacular increase in the monetarization of the market economy. Use of the trachy in taxation continued in the twelfth century.¹⁵⁵

The reforms of Alexios I Komnenos reintroduced, on new terms and with fresh prospects, the old system of the *charagma* in the collection of tax, though now it was in line with the new monetary situation and the need for only the devalued trachy to be used in fiscal transactions. There were also changes in other fiscal practices—changes that predate the reforms of Alexios, taking place in the closing decades of the eleventh century. Although these innovations may have been devised by one of Alexios' prede-

¹⁵³ Morrisson, "La logarikhè"; cf. Morrisson, "Byzantine Money," 952.

¹⁵⁴ Zonaras, 18.22: διὰ χαλκῶν ἐδαμοφόρει.

¹⁵⁵ The tax policy of Alexios Komnenos was a tough one. See A. Harvey, "Land and Taxation in the Reign of Alexios I Komnenos: The Evidence of Theophylact of Ochrid," *REB* 51 (1993): 139–54.

cessors, I shall examine them in the context of his reign because it was he who was in a position to implement them properly and, above all, because it is during his reign that the sources refer to them.

The archaic term *epibole*¹⁵⁶ was used to refer to a new fiscal practice that amounted to the first step toward the simplified taxation on land of the centuries to come and that was easier to apply to large holdings of agricultural land. The middle Byzantine *epibole*—which bore no resemblance except in name to the early Byzantine *adjectio sterilitium*—is known to us from certain documents of the time of Alexios I Komnenos and from the fiscal treatise of the library of San Marco, which dates from the twelfth century.

Under this system, the tax assessor added together all the taxes that had been assessed for the tax unit (an estate or a village), including the taxes that were not being collected by reason of exemption or temporary reduction, to which he added all the tax that had to be paid on any newly cultivated land. Then he divided the total by the number of modioi of land held by the tax unit, regardless of whether all the land was actually cultivated. The result of this division was the tax indicator, that is, the number of modioi of land that corresponded to each nomisma of tax on that specific estate. The indicator, which might differ from tax unit to tax unit, would be used in the future as a point of reference to check whether the tax paid by each landowner agreed with the sum he actually owed—or, in other words, to check whether the landowner might in the meantime have increased his assets by encroaching on land adjacent to his own (perhaps state land). If something like this were found to have happened, the additional land would be declared to be a surplus (*perisseia*) and would pass into the ownership of the state. This was another application of the system of *hikanosis*, comparable to the land assessment of the time of the Macedonian emperors.

The *epibole*, whose indicator could be modified by imperial decision, allowed the tax to be adjusted easily if an imbalance developed in the monetary system. It could also be used as a persuasive means of exerting pressure to clear fresh land for cultivation, since the indicator was based solely on the quantity of land owned and not on its quality. While initially, at least, the *epibole* was designed to detect land that had already been encroached upon, it was also designed to prevent any further acts of encroachment, since it provided a simple way of ascertaining that such had occurred.

The *epibole* system was clearly devised on the basis of the large estates, and it was only in connection with them that the system was worthwhile. It does not seem to have survived after the twelfth century, when simpler forms of taxation were adopted.

In parallel with the introduction of the *epibole*, one can also observe the gradual abandonment of the land register system and its replacement with the *praktikon*, a process that took place during the eleventh century and had been completed in the reign of Alexios I. Constant updating was essential for the land register to function, but this had become increasingly complex because of the inevitable fragmentation to

¹⁵⁶ Svoronos, *Cadastre*, 119ff; idem, "L'épibolè à l'époque des Comnènes," *TM* 3 (1968): 375–95; Oikonomides, *Fiscalité*, 56–61.

which holdings were subject (through marriage, inheritance, sale, etc.) and the dispersal of assets. Taxpayers who owned property in more than one tax unit requested—successfully—that all their obligations should be transferred to one unit, where they would pay everything together, in a single sum. Grouped tax obligations thus came to be in the form of a *praktikon* (εἰς πρακτικῶν τάξιν).¹⁵⁷

The *praktikon* was originally the setting down in writing of a decision, usually connected with the boundaries of land, that was signed by witnesses. The term was also used to refer to the document by which a state employee handed a piece of land over to someone (earliest reference: 1073).¹⁵⁸ The second type of *praktikon* came to prevail after the twelfth century, and it was the principal fiscal document of the last centuries of Byzantium.

Rather than setting out from the land and describing its distribution, as the land register had done, the *praktikon* started with the taxpayer and described his property, regardless of where it might be located. It was a personal document, one more suited to the needs of the large landowners in a state economy that revolved around privileges. All the *praktika* of each area were recorded in a codex that, in the time of the Palaiologoi, was called the *thesis* or *megale thesis*. This term had already been in use in the eleventh century—or perhaps much earlier—to describe the ledger of a state department.¹⁵⁹ In 1086–87, however, it seems clear that the land register, while still in existence as a tax instrument, was obsolete, whereas the *praktikon* was the document now used for the land census. The last entries in the surviving *isokodika* date from around the middle of the eleventh century and no later. The *praktikon* was, of course, a comparatively flexible and adaptable instrument. It was equally capable of describing the property of a large landowner and a village community, even if the inhabitants of the village (or some of them) were *paroikoi*.

The transition from the land register to the *praktikon* had a further effect on the terminology. Until the twelfth century,¹⁶⁰ the recording of land by state employees was still called *anagraphe* and the employee who performed it was an *anagrapheus*. Little by little, however, the terms *apographe* and *apographeus* make their appearance, being used with increasing frequency by authors who lived in the late eleventh and twelfth centuries¹⁶¹ and becoming completely predominant in the thirteenth century. In 1195 we have a reference to an *apographe* being carried out six years earlier by an *anagrapheus*.¹⁶² It seems clear that the transition from one term to the other took place during the second half of the twelfth century.

¹⁵⁷ Dölger, *Finanzverwaltung*, 122.

¹⁵⁸ Ἐγγράφα Πάτμου, 2: no. 50.

¹⁵⁹ Dölger, *Finanzverwaltung*, 111 n. 8; F. Dölger, “Zur Ableitung des byzantinischen Verwaltungsterminus θέμα,” *Historia* 4 (1955): 189–98; *Actes de Dionysiou*, ed. N. Oikonomides, Archives de l’Athos (Paris, 1968), 141–42; J. Darrouzès, “Dossier sur le charisticariat,” *Polychronion: Festschrift Franz Dölger* (as above, note 8), 157, 159.

¹⁶⁰ E.g., in 1181; *Lavra* 1: no. 65, line 78.

¹⁶¹ Skylitzes, 419; Zonaras, 505, 659, 737; Choniates, 203, 205, 402.

¹⁶² MM 4:325.

The Last Centuries For the period from the thirteenth to the fifteenth century, we have only one regulatory fiscal text, perhaps because the tax system was much more simple and because privileges and private enterprise, which were beyond the direct control of the state, were now much more important in the collection of tax. This is the brief *Apokope psomion*, dating from 1232 and regarded as Byzantine although it originated in Cyprus. The text is not always clear. However, our information is admirably supplemented by the numerous tax documents, most of them *praktika*, that have survived in monastic archives and refer to Asia Minor (13th century), Macedonia, and Lemnos (13th–15th century). Studies of these documents have led to the publication of the works¹⁶³ on which the discussion below is based.

Despite the widespread grants of privileges and the organic role they played in the late Byzantine state economy (see below), the state continued to exert direct control over the public finances, even when it stood to collect nothing from them. *Apographe* and *exisosis*—that is, the registration of taxable material and checking of the extent to which each private citizen possessed the property to which he was entitled and not more—remained until the end the exclusive province of the state and its employees. Even monastic lands, which were completely free of tax, were subject to these periodic checks. The state determined how much tax each *paroikos* owed to his landlord and for what other payments and services he was liable. In other words, privileges were defined down to their last detail by the state, which—theoretically, at least—made sure that the holder of the privilege did not commit excesses. Consequently, we can see the tax system as being the same for all and as being applied blindly—in principle—to rich and poor alike. Privileges were then added on to emphasize the necessary distinctions.

For the calculation of the basic land tax (the *telos* or *kephalaion*), the quality of land had first to be determined. However, land quality is mentioned only very rarely, mainly when the land in question was not at all productive (when it was hilly, mountainous, stony, unplowable, wooded, fallow and unused, etc.). As a rule, the entire estate—that is, the total of its arable land—was taxed at the rate of one hyperpyron per 50 modioi, an arrangement that looks like a lump-sum tax and is predominant in the *praktika* of the fourteenth century. Other rates are rarely mentioned, and then only for land of exceptionally high quality (such as that which was watered all year round) or of particularly low quality (with a tax rate of one hyperpyron per 30–40 modioi or per 100 modioi, respectively). This new tax rate, which appears to be lighter than that of the

¹⁶³ The most important of these works, on which I have relied heavily, are listed below. Among earlier works, see the studies of F. Dölger, especially his comments in *Aus den Schatzkammern des heiligen Berges* (Munich, 1948), and of G. Ostrogorsky, especially his study of the Byzantine *praktika*, published as the second part of *Pour l'histoire de la féodalité byzantine* (Brussels, 1954). Among more recent publications, see J. Lefort, "Fiscalité médiévale et informatique: Recherches sur les barèmes pour l'imposition des paysans byzantins au XIVe siècle," *RH* 512 (1974): 315–52; Angold, *Government in Exile*, 202–36; A. E. Laiou-Thomadakis, *Peasant Society in the Late Byzantine Empire: A Social and Demographic Study* (Princeton, N.J., 1977), 158–82; the chapter on tax revenue by N. Svoronos in *Lavra*, 4:153–73; and, of course, the material and commentaries in the most recent volumes in the series *Archives de l'Athos*, up to volume 4 of *Iviron* (1995). Cf. Laiou, "Agrarian Economy," 330ff.

past, actually did away with the majority of the quality distinctions and imposed an average tax rate on the entire estate. The new system was inspired by the same spirit of simplification that led to the *epibole* in the eleventh century (see p. 1031) and that was most useful when the state employee was faced with the task of taxing large estates. The new lump-sum rate seems to have been in place in 1232, since it is mentioned in the *Apokope psomion* (at one hyperpyron per 48 modioi; the rounding up to 50 came later, as the decimal system gained currency).

In some documents of the thirteenth century, the *kephalaion* is accompanied by *charagma* whose precise significance has not yet been determined. The *charagma* amounted to between 2.5% and 7.5% of the *kephalaion* and, if we remember the earlier history of the word, might refer to the percentage of the tax that had to be paid in “good” currency. However, it is not impossible that it was calculated on the sum of the tax obligations of the estate.

Needless to say, the rates applied to the taxation of intensive crops were different and much steeper; they were used for taxing vineyards (one hyperpyron per 4–6 modioi) and market gardens, the yield of which was much greater than that of grain fields. It is possible that there were financial and/or tax advantages in the cultivation by *paroikoi* of vineyards on land that belonged neither to them nor to their master. Something of this sort must lie behind the frequent references to *ampelia atele*, which were taxed along with the other property of the tenant, to *ampelia hypotele*, the income from which was shared among a number of owners, and in particular to *xenochoritikon ampelopakton*, the renting of a vineyard from the inhabitants of another village. In the last case, the income looks extremely low, probably because it had to be shared by the owner of the land, the master of the *paroikoi*, and the *paroikoi* themselves (who would presumably have to have had some sort of incentive).

Grazing land also brought income to its owner and to the state, which owned all unclaimed land. The use of grazing land to pasture animals created for the owner of the animals the obligation to pay the *ennomion*—that is, the grazing rights—collected either by the owner of the land or by the state as the owner of all unclaimed grazing land. The *ennomion* was thus a financial obligation on the animals themselves and often appears as a tax on animals, frequently called a *dekateia* (tithe) and combined with the word for the type of animal using the land (*probatodekateia*, *choirodekateia*, or *choiroennomion*, *melissoennomion*, etc.). The *orike*, charged on the exploitation of forests, came into the same category.¹⁶⁴ The state charged only land tax on privately owned grazing ground, at a rate lower than that on arable land. Special taxes—or rather, levies—which might be as high as 33%, were charged on certain high-income secondary activities such as fishing.

There were separate taxes on certain manufacturing activities that complemented the agricultural economy, such as mills (1–3 hyperpyra each; 2 was the usual figure) and flax-retting units (2–10 hyperpyra each). As a rule, these taxes were paid by the landowner, but it was not uncommon for ownership of the mill to be split between the landowner and his *paroikoi*, in which case the tax would be shared out accordingly.

¹⁶⁴ *Iviron*, 3: no. 54 and p. 62.

The main source of state revenue was the tax the *paroikoi* paid their masters twice a year, in March and September. This would be passed on to the state, or, if the landowner enjoyed privileges, he would keep it for himself. In the *praktika*, the tax unit is the *stasis* of the *paroikoi*.¹⁶⁵ his family, his land, his domestic animals, and possibly other possessions such as mills and boats. All these items were his property and they were subject to state tax, not rent. This tax was called the *telos* or, more specifically, the *oikoumenon*, because it centered on the house (*oikia*) of the *paroikos*. Tax was paid even by the most poverty-stricken peasants, which means that it was not only the property of the *paroikoi* that was taxed but also their very existence as units capable of producing income, rather in the manner of the *kapnikon* of the middle Byzantine period.

The land of the *paroikos* consisted usually of vineyards and gardens with fruit trees. It was natural that the *paroikoi* should choose to farm, on their own land, crops that were labor intensive but produced a high yield, which they would not have to share with anyone. This land consisted mostly of the so-called *esothyria*, farmland attached to the village, where intensive farming and care were easier. There were even *paroikoi* who owned fields, sometimes quite large ones (more than 100 modioi, in some cases), but this was not a common phenomenon. These fields were referred to as *esothyrochoraphia*. Abandoned pieces of land (*exaleimmata*) were listed, but not taxed. New pieces of arable ground that the peasants had created by means of their own personal labor were also not taxed, or were taxed at low rates.¹⁶⁶

The animals of the *paroikos* registered in the *praktikon*, and consequently “taxed,” were usually oxen (with special mention being made of pairs of oxen), cows, sheep, goats, pigs, and the occasional horse, mule, or donkey. Hives of bees are also mentioned, but not the smaller domestic animals.

Regular mentions, finally, are made among the obligations of the *paroikoi* to certain days of corvée per year. The state determined how many such days there would be (the *angareiai panemerioi*) and made it clear that the number was not to be increased even in the event of the master claiming that the work done was not sufficient (καθὼς δυνάμεως ἔχει ὁ πάροικος). The number of days usually ranged from twelve to twenty-four per year, but there were significant deviations from this.¹⁶⁷ It seems to me that the state, whose ability to exercise supervision on its own behalf was of necessity limited, would have benefited less from this free labor, while private landowners (and holders of privileges) would have benefited to the full.

I have mentioned the main taxes as they appear in the *praktika* of the fourteenth century, which are the most numerous and detailed. These *praktika* also mention a

¹⁶⁵ Cf. G. Litavrin, “Parik i arendator,” *VizVrem* 52 (1991): 3–12.

¹⁶⁶ See M. Bartusis, “Εξάλειμμα: Escheat in Byzantium,” *DOP* 40 (1986): 55–81. I think that the term *ekleiomia*, which this author discusses (pp. 79–81), should be interpreted as land that recently ἔγινε λεία (that is, became “flat,” capable of growing crops). We know, moreover, of one *ekleiomia* that became a garden and was located near the village. MM 4:267, for the year 1284.

¹⁶⁷ The *praktikon* for Lampsakos in 1219, for example, refers to seven days a year (Tafel and Thomas, 2:209), and we also have a *praktikon* of the 13th century that refers to 52 days a year. *Actes d'Esphigménou*, ed. J. Lefort, Archives de l'Athos (Paris, 1973), no. 7, line 19. Cf. Laiou, “Agrarian Economy,” 329–36.

number of other charges in the nature of taxation, which correspond to the extraordinary imposts discussed for the middle Byzantine period. These extraordinary charges are also known to us from documents relating to privileges, which state quite clearly what is *not* to be collected from the privileged estate and its farmers.

It should be noted, in connection with these secondary charges, that they were often of a local nature. I have already referred to local taxes as having existed when the state was unified. Naturally enough, when the state split in 1204 and subsequent to the geographical rift that was intensified when Constantinople was reconquered in 1261, taxation of a local nature gained in significance. Even so, the centralism of the state is capable of creating misleading impressions that can lead to erroneous conclusions. The *sitarkia*, a tax characteristic of Asia Minor and more specifically of the empire of Nicaea, is also mentioned in connection with a few Byzantine privileges in Macedonia¹⁶⁸ and in some of the chrysobulls of Stefan Dušan as a charge whose collection was not forbidden by the tax exemption.¹⁶⁹ One has to wonder, however, why it is that if the *sitarkia* was really collected in Macedonia in the fourteenth century it is not mentioned in any of the surviving *praktika*. One might suspect that it was only collected in exceptional cases, which is why it is not mentioned in the documents related to current taxation. Other hypotheses are also possible, and all are equally uncertain. We need a study to provide us with a knowledge of the special taxes of the late Byzantine period. For the time being, I shall attempt to describe what is known and to interpret, as far as possible, the names used.

Many of these special taxes had survived from the middle Byzantine period. Others made their first appearance after 1204, in the empire of Nicaea. An extraordinary charge introduced to meet a specific need of the state might often be converted into a contribution in cash and then into a regular payment to the state. Some of these payments were among the items of revenue the state refused to concede to individual holders of privileges, and consequently they were among the exceptions listed on the documents by which tax exemption was granted. In the thirteenth century, some of these contributions—the *sitarkia*, the *agape*, and the *ploimoi*—seem to have been charged chiefly on military *pronoiai* located outside Constantinople.¹⁷⁰

In the late twelfth century, many of the imposts we know from the eleventh century were still being collected. In 1186, Isaac II Angelos¹⁷¹ refers to the following charges, the majority of which continue to be mentioned in later periods: (1) the supply of labor free of charge (*angareia*, *parangareia*, *psomozemia*, *kastroktisia*,¹⁷² *ktisis katargon*), all services

¹⁶⁸ *Actes de Zographou*, ed. W. Regel, E. Kurtz, and B. Korablev, *Archive de l'Athos* (= *VizVrem* 13 [1907]; repr. Amsterdam, 1969), no. 31; *Esphigménou*, no. 20. Although the authenticity of the latter document has been questioned, I think it is of value as evidence; even if it is forged, it was based on a genuine original.

¹⁶⁹ A. Soloviev and V. Moshin, *Grčke Povelje Srpskih vladara* (Belgrade, 1936), nos. 2, 9, 11, 17, and 18.

¹⁷⁰ Zepos, *Jus*, 1:663.

¹⁷¹ Ἐγγράφα Πάτριον, 1: no. 10.

¹⁷² See M. Bartusis, "State Demands of Building and Repairing Fortifications in Late Byzantium and Medieval Serbia," *BSI* 49 (1988): 205–12.

that were known in earlier times and appear into the fourteenth century; (2) obligations to supply soldiers (the *ploimoi* and the *aloga*, possibly corresponding to the earlier *monoprosopon*); (3) obligations to supply hospitality (*mitaton*,¹⁷³ *syndosia* for the accommodation of ambassadors,¹⁷⁴ *dianome* [?]); (4) gratuities paid to the authorities, such as the *proskynetikion*, the payment made to welcome a new commander. There are references in 1186 to a number of other contributions made by *paroikoi*: the *synone*, the *kapnikon*, the *aktemonitikion*, and the *paroikiatikon*. These were dependent on the property of the *paroikoi* and are familiar from earlier times. They later disappeared, presumably because they could not be incorporated into the new and simplified system. Only the *zeugologion*, also a tax on the *paroikoi*, survived into the thirteenth and fourteenth centuries.

In the period from the thirteenth to the fifteenth century, there was a significant degree of continuity in the use of terms, but the content of the charges involved had changed. There is also evidence of new terms: the *sitarkia*, which first appears in the thirteenth century, probably originated in the *sitarkesis* or *sitarchia* of towns, that is, the supplying of fortified settlements with foodstuffs. There is evidence of this obligation in the ninth century, but by the thirteenth century it had been converted into a regular payment in cash.¹⁷⁵ The exact significance of the term *agape*, "love," has not been determined, but it may have been a contribution designed to buy peace with neighboring states,¹⁷⁶ something like the *alamanikon* imposed in the late twelfth century to meet the demands of Emperor Henry VI of Sicily.¹⁷⁷ The *ploimoi*, which was the obligation on a region to supply sailors to man the fleet, had been enforced for very many years; in the thirteenth century, it became a cash payment, although it continued to be calculated as if it were a contribution that would lead to the recruitment of real sailors.¹⁷⁸ Something similar must also have applied to the levy known as the *kontaratoi*, which was also known in the eleventh century and must originally have involved the enlistment (or the financial support) of soldiers armed with spears (*kontaratikion*). The *oikomodoparasporon* was obviously a continuation of the familiar eleventh-century *oikomodion*, while the fourteenth century also saw the appearance of the *oinometrion*.

Needless to say, the charges designed to secure the income of the local commanders were left in place. The purpose of the *doukike chreia* or the *katepanike chreia* was to feed the local commander, and the *kaniskia* made sure that financial support would be forthcoming when he visited an estate. Hospitality free of charge was ensured by means of the *mitaton* and the *aplekton*. The *kaniskion*, a gift consisting of foodstuffs, was originally

¹⁷³ M. Bartusis, "State Demands for the Billeting of Soldiers in Late Byzantium," *ZRVI* 26 (1987): 115–23.

¹⁷⁴ Cf. *Lavra*, 4: no. 71, lines 81ff.

¹⁷⁵ *MM* 4:45–46; 5:13.

¹⁷⁶ This hypothesis has been put forward by H. Ahrweiler, "La concession des droits incorporels: Donations conditionnelles," *Actes du XIIe Congrès international d'études byzantines, Ochride, 1961* (Belgrade, 1964), 109 n. 35. I do not think it can be identified with the *kapnikon*, as proposed by Angold, *Government in Exile*, 224–25.

¹⁷⁷ Choniates, 478.

¹⁷⁸ *MM* 4:250–52; in 1235, 1½ πλόνιος was levied on a village, out of a total of 150 for the entire *katepanikion* of Smyrna.

made in kind¹⁷⁹ by the *paroikoi* to their master three times a year (at Christmas, during Carnival, and at Easter). The *paradotikion* was a payment made to the state employee who made over an estate (or a *pronoia*) to its beneficiary. The *vigliatikon* ensured protection against pirates, free of charge. In other words, we continue to find a large number of charges that were not taxes in favor of the state, but direct fees paid to state employees, with the state benefiting to the extent that it was relieved of an item of expenditure.

There was also a “collective judicial fine,” which is often mentioned after the thirteenth century and which the state always retained for itself even in cases of tax exemption: “the three *kephalaia* of the *aer*; murder, the defiling of a virgin, and treasure trove.”¹⁸⁰ The term *aer* has been connected to the *aerikon* (which, however, was a contribution made in the form of animals for food). The connection is principally due, I believe, to the fact that the *aerikon* involved a judicial problem in a novel of 1085.¹⁸¹ It has also been argued that the *aer* was converted into a regular annual payment to the state.

The tax system I have been describing survived almost in its entirety throughout the period of Serbian rule in Macedonia.¹⁸² In parallel, however, new special levies in one form or another (sometimes as the appropriation by the state or the lord of any part of a property that had been abandoned) and of a clearly local nature appeared in Macedonia¹⁸³ and elsewhere, such as the *phloriatikon* and the two *myzai* or *meizai* that we know were implemented in the Peloponnese.¹⁸⁴ Other charges are found with a specific and short-term purpose, such as the *kapeliatikon* or *oinopoleion* imposed on the wineshops of Macedonia and Lemnos. After 1404, Manuel II demanded that each peasant who owned a pair of plowing oxen should contribute a *koilo* of wheat from which ship’s biscuit would be baked (ὕπερ παξειμαδίου τῶν κατέργων), and this contribution was called the *kokiatikon* (from *coca* = a ship[?]).¹⁸⁵

These special taxes were very numerous, and there is little point in listing them all. What is of importance is that during the fourteenth century the regular tax burden on free farmers was constantly increasing while the number of such taxpayers was in constant decline, given that more and more of them were becoming *paroikoi*.

¹⁷⁹ There are instances in which the *kaniskion* was certainly converted into a cash payment. *Esphigménou*, no. 8, lines 9–10 (late 13th century) tells us that the charge for all three *kaniskia* was 6 kokkia, that is, 1/4 nomisma.

¹⁸⁰ M. A. Tourtoglou, *Tò fονικόν καὶ ἡ ἀποζημίωσις τοῦ παθόντος* (Athens, 1960); idem, *Παρθενοφορία καὶ εὐρεσις θησαυροῦ* (Athens, 1963); C. Morrisson, “La découverte des trésors à l’époque byzantine: Théorie et pratique de l’eὐρεσις θησαυροῦ,” *TM* 8 (1981): 321–43. See also A. E. Laiou, “Le débat sur les droits du fisc et les droits régaliens au début du 14e siècle,” *REB* 58 (2000): 97–122.

¹⁸¹ Zepos, *Jus*, 1:312.

¹⁸² Cf. T. Maniati-Kokkini, “Προνομιακές παραχωρήσεις του σέρβου αυτοκράτορα Στεφάνου Δούσαν (1344–1355),” in *Βυζάντιο καὶ Σέρβοι τον ΙΔ αἰ.* (Athens, 1996), 307–38.

¹⁸³ Including the γουβελιατικόν or κουβελιατικόν, which is known to us from the period of Serbian rule but seems to have existed earlier, under the Byzantines; see *Actes de Xénophon*, ed. D. Papachrysanthou, Archives de l’Athos (Paris, 1986), 209.

¹⁸⁴ E. Vranoussi, “Notes sur quelques institutions du Péloponnèse byzantin (l’ἀβιωτίκιον, le φλωριατικόν et les δύο μείζαι ou μύζαι,” *EtBalk* 4 (1978): 81–88.

¹⁸⁵ N. Oikonomides, “Ottoman Influence on Late Byzantine Fiscal Practice,” *SüdostF* 45 (1986): 10.

To conclude, let us note one unusual feature observed in the area of Thessalonike, Chalkidike, and the lower course of the Strymon during the period from 1404 to 1421, when, by the treaty of 1403, that part of Macedonia returned to Byzantine rule after twenty years under Ottoman occupation.¹⁸⁶ By the treaty of 1403, Süleyman Çelebi, eldest son of Bayezid I, conceded the area to the Byzantine emperor along with the fiscal revenue the Ottoman authorities had been collecting until that time. In the years that followed, the Byzantines thus continued to apply, almost in its entirety, the Ottoman tax system, collecting the *haradj* (a tax on those who cultivated the soil), the special contributions called the *phosatiatikon* and the *ospetiatikon* (the latter of which may be the same as the *kephalatikion*), the *kephalatikion* itself (here meaning the poll tax, the *ispendje* or *djizya*),¹⁸⁷ the *dekate* (the tithe, *nsr*, paid only by peasants who owned a pair of plowing oxen), the corvées that were common to all systems,¹⁸⁸ and the *aer*, which had formerly existed under the Byzantines but also had an Ottoman equivalent, the *bad-i hava*. In order to impose this taxation, new types of fiscal documents were prepared, and the peasants were grouped into new categories. Under the new system, land was not a taxable commodity (the Ottoman conquest had made almost all of it the property of the sultan), and while tax increased (to five or seven times the level of the *telos* in the fourteenth century), secondary taxes and contributions were cut drastically, as was the *dekate*, the tithe paid for use of the land. If all these factors are calculated together, it could be seen that under the Ottoman-inspired system the peasant was paying the state approximately half what he had been paying his master in the fourteenth century, though it is true that the payment was in cash rather than in kind. This tax relief for the rural population may perhaps explain the successes of the Ottomans in the fourteenth century, and it certainly explains why the Byzantines did not dare return to the old system after 1404.

Privilege as a Fiscal Instrument (11th–12th Centuries)

The granting of privileges was an ancient practice. Where the state economy was concerned, the privilege could take the form of tax exemption on the beneficiary's property or of the conceding to him, by the state, of a sum (of money or in kind) that might reach his hands by a number of means: as a direct payment by a representative of the state (a central treasury or a provincial tax collector), or as a grant to the beneficiary of the right to collect on his own behalf, directly from taxpayers, certain items of state revenue.¹⁸⁹

As the name suggests, the privilege was originally something exceptional granted to institutions (mostly of an ecclesiastical or charitable nature) or occupational categories. This was true both for tax exemption and for concessions of state revenue. In 800, in

¹⁸⁶ Ibid., 1–24.

¹⁸⁷ Cf. also Z. Tsirpanlis, "Τὸ 'κεφαλατίκι' (testagium—mazzucato) στὴν ἱπποτοκρατούμενη Κῶ (1441–1512)," *Βυζαντινά* 15 (1989): 170–71.

¹⁸⁸ But which, under this system, were sometimes converted into cash payments; e.g., *Lavra*, 3: no. 165, lines 37–38.

¹⁸⁹ Cf. Ahrweiler, "La concession," 104–14.

Istria, each *tribunus* of the armed forces in the area was entitled to five *excusati*, that is, five taxpayers who paid their taxes directly to him.¹⁹⁰ Other households of *excusati* were conceded to monasteries in the tenth century, but here the concession was made selectively. Over time, one can observe a tendency for the privileges to become personalized, and by about the year 1000 (and in some cases later) the concessions granted to provincial churches no longer covered the entire category of beneficiaries (in this case, members of the clergy) but only a certain number of them. In these cases, in fact, the concession was made to the head of the church—the bishop or archbishop—who acquired the right to exempt from tax a certain number of the clergy, whom he would select. In other words, the privilege was not only personal (for the bishop), but also allowed him to create a clientele of his own among his subordinates.¹⁹¹

The eleventh century—a period of severe special taxation and corvées—was notable for the increase in the number of personal privileges, and especially of instances of tax exemption. The *exkousseia*, which absolved the beneficiary from precisely such imposts, was sufficient to protect the powerful and their lands. Despite the considerable increase in their number, the privileges continued to be exceptional in nature, but toward the end of the eleventh century—at the time when payment of the *roga* to the aristocrats largely ceased—privileges gradually became a basic fiscal instrument, presumably so as to release the gold coinage needed at that time to deal with the growth in trade. Increasingly, the granting of privileges was combined with a particular use of state land, which was given as grant by the emperor together with other kinds of state revenues. These tendencies can be seen in clear and highly striking form as early as the reign of Alexios I Komnenos. They are of particular interest for this discussion because it was more and more common for the beneficiaries to be secular nobles, and not only ecclesiastical institutions. The following are some examples.

In 1084 the *protosebastos* Adrianos Komnenos was entitled to collect all the taxes of the Kassandra peninsula, directly and for his own benefit. The land did not belong to him; the state had conceded him its revenue.¹⁹²

A different example is Nikephoros Melissenos, who had been among the contenders for the throne in 1081, but ultimately withdrew his claim when Alexios I promised him the title of *kaisar* and “the city of Thessalonike.” Sure enough, after Alexios was crowned, Melissenos was appointed *kaisar* and began to collect the fiscal revenue of Thessalonike and its surrounding area; in other words, the taxes and other revenue on the land belonging to the state. In order to create a clientele, Melissenos in turn granted some of these estates to his own people, including Samuel Bourtzes, a blood relative who had lost his property in Asia Minor to the Turks.¹⁹³ Among other instances

¹⁹⁰ See P. S. Leicht, “Gli *excusati* nelle provincie italiane soggette all’Impero d’Oriente,” *PBSR* 24 (1956): 22–28.

¹⁹¹ This is examined in N. Oikonomides, “Tax Exemptions for the Secular Clergy under Basil II,” in *Kathegetria: Essays Presented to Joan Hussey on Her 80th Birthday*, ed. J. Chrysostomides (London, 1988), 317–26.

¹⁹² *Lavra*, 1: no. 46.

¹⁹³ *Actes de Docheiariou*, ed. N. Oikonomides, Archives de l’Athos (Paris, 1984), no. 4.

of large tracts of land being conceded to highly placed officials who were kin of the emperor are those of the *sebastokrator* Isaac in Thessalonike in 1094¹⁹⁴ and of the *kaisar* Ioannes Rogerios in the mid-twelfth century.¹⁹⁵

We have particulars of the lands of Gregory Pakourianos, commander-in-chief of the armed forces under Alexios I, because in 1083 he founded the Petritzos monastery at Bachkovo and donated his fortune to it. Pakourianos, who bore all the hallmarks of a true *condottiere*, provided the services of his group of “companions” along with his own, and consequently incurred considerable expenses in maintaining this entourage. Most of his estates were gifts from the emperor; few had been bought. The majority had previously been state property, and the state had conceded to him the right to collect all the state revenue connected with the land in question.¹⁹⁶

The donations made to Leon Kephalas were of a different nature and on a much smaller scale. This middle-ranking army leader initially received (in 1079 and 1082) the relatively small donation of a winter grazing ground with an income of 5½ *nomismata*. In 1084 he was given a public estate (*proasteion*) that had previously been conceded successively to a number of other military men; the relevant document is not entirely clear but gives the impression that it was the practice for the estate to be conceded in return for services, and that the state always retained some rights on it. It should be noted, too, that there was no tax exemption on the estate.

In 1086, after he had successfully and heroically defended Larissa against the Normans, Kephalas was given an entire *chorion*, Chostiani, with complete tax exemption and the right to pass the property on to his heirs on the same terms. He was later granted other lands, also on the same conditions; after passing to his children on his death, all these estates ultimately came into the possession of the Great Lavra.¹⁹⁷

Here, then, we are dealing with a new concept of society and financial recompense, one that comes closer to feudalism and differs in substantive respects from the system of the *roga*, which was retained only for the remuneration of the emperor’s low-ranking servants and soldiers. The distribution of silk cloth as part of the salary of officials was abolished; the sources mention these materials, which were now available in greater quantity, only as gifts. State officials now received income that they collected directly from the taxpayers, the *paroikoi*, who thus entered into a relationship of economic and social dependence on the officials.

The economic relationship between “lord” and *paroikoi* was no longer expressed only in the form of coinage. Although the state always retained the right to determine exactly what each peasant owed to his master, there were many possible ways of arranging the relationship between master and *paroikos*. Tax was always calculated in money terms by the employees of the state, and it was always collected by the state in cash, but we do not know what the peasants paid to their master, who was responsible for

¹⁹⁴ *Lavra*, 1, no. 151.

¹⁹⁵ B. Ferjančić, “Apanažni posed kesara Jovana Rogerija,” *ZRVI* 12 (1970): 193–201.

¹⁹⁶ Lemerle, *Cinq études*, 113–91.

¹⁹⁷ *Lavra*, 1: nos. 44, 45, 48, 49, 60, and 65; cf. Oikonomides, *Fiscalité*, 192–94.

the payment of taxes to the state. The form taken by the rent the *paroikoi* paid on the land they cultivated was also a matter for private agreement. If the master collected rent (and tax) in kind, one can imagine that he would have amassed a surplus of agricultural produce that he could then sell; if, on the other hand, he attempted to collect the sums in cash, he would benefit from lending money to his peasants. It seems most likely that the masters collected tax and rent primarily in kind, then sold the surplus products and paid off their obligations to the state—if, of course, they were still liable for the payment of these obligations.

We encounter donations of this kind throughout the later centuries, right until the end of the empire. Typically, the land would be donated by the state to the official (usually with the right to pass it to his descendants), together with a grant of all the rights the state might have on the land in question. The annual revenue that the state had previously collected and that was now the beneficiary's income was predetermined and, in theory at least, was under state control, though this would be difficult to implement on private property, which, inevitably, was liable to be bequeathed, fragmented, alienated, and so on. In most cases, the donations were toward secular persons who had done the emperor some great service, and they were clearly of an exceptional nature. Indeed, it was inevitable that they should be exceptional, since each such donation finally and irrevocably reduced the landed property of the state or the emperor.

Privileges as a System (Pronoia)

In the twelfth century, the special donation ceased to be a mere fiscal instrument and became a fully developed system for the financing of state officials and officers. It was based on a change that made little practical difference to the beneficiary but was of colossal significance for the state: the donation was for life only and could not be inherited. Since after the death of the beneficiary the land, with its revenue, was to return to the state, the state's property remained intact and could subsequently be conceded to someone else. The new donation thus rapidly became a regular fee granted as a reward for services the beneficiary had provided, or was to provide, to the state. This is the system that later became known as *pronoia* (πρόνοια) or *oikonomia* (οικονομία),¹⁹⁸ which was the foundation for the management of the state economy in the provinces. Under this system, a large part of the state's revenue never reached the central treasury, being passed directly as their fees to state employees, most, though not all, of whom were soldiers.

These concessions strengthened the position of the beneficiary vis-à-vis the peasants granted to him, since he had the appearance of being their "master" even when they were free farmers. This social impact of *pronoia* was dictated by the nature of things,

¹⁹⁸ The literature on the institution of *pronoia* is extensive, although the basic work is still G. Ostrogorsky, *Pour l'histoire de la féodalité byzantine*. Among recent works (with bibliographies) are K. Khvostova, "Proniia i sotsial'no-ekonomicheskie problemy," *VizVrem* 49 (1988): 13–23; T. Maniati-Kokkini, "Το Χρονικό του Μορέως και η βυζαντινή πρόνοια," *Βυζαντικά* 14 (1994): 483–508; A. Kazhdan, "Pronoia: The History of a Scholarly Discussion," *Mediterranean Historical Review* (= *Festschrift David Jacoby*) 10.1–2 (1995): 133–63.

but not in theory, and certainly not by the intention of the state. As we shall see in more detail below, the state's purpose was only to provide the *pronoia* holder with an economic reward, not a higher position in society, and its intention was still less to create a new social hierarchy. That, indeed, was why the *pronoia* was granted to each beneficiary on a personal basis in place of a salary. The relationship between the state and the *pronoia* holder was a purely economic one.

It is not easy to identify the point at which the system began, and one is compelled to seek out its roots in occasional scattered instances that look like *pronoia*. I have already noted the land conceded to Leon Kephalas in 1084 after it had passed through the hands of other military men. There is another uncertain case of land being granted to a soldier shortly before 1104.¹⁹⁹ Before 1118 there are records of land in Macedonia being ceded by the state to soldiers, and then to other soldiers after the death of the first beneficiaries.²⁰⁰ However, the examples become much more numerous in the reign of Manuel I Komnenos, whom Niketas Choniates²⁰¹ describes as having implemented a general policy of granting peasants dependent on the state (οἱ τὸν δημόσιον πάλαι δεσπότην λαχόντες) to soldiers, some of whom, indeed, were barbarians. These soldiers, Choniates writes, collected from the peasants what they would normally have paid the state, and the emperor ceased to pay the soldiers out of his treasury. And, he adds, this method was not an entirely new one: Manuel was abusing a measure introduced by earlier emperors for use in exceptional cases, such as for those who had distinguished themselves in war (people, one can assume, such as Leon Kephalas or Gregory Pakourianos, already discussed).

The word *pronoia* is not to be found in Choniates' text, but there is no doubt among scholars that this passage refers to the distribution of *pronoiai* on a large scale. During and after the reign of Manuel I, references to *pronoia* become more and more frequent. Initially, during the twelfth century, the system was far from perfect and the unclear wording of the donations caused friction with neighbors. Some *pronoia* holders believed they were entitled to use their neighbors' land on which to settle their own *paroikoi*. Others, such as the Cumans of Moglena, tried to seize tenants of the neighboring monastery of Lavra.²⁰² Friction between the greedy and menacing soldier-beneficiaries and their neighbors continued through the centuries that followed, but in the meantime the system had become better organized and the authorities could intervene in a more effective manner.

It is important to remember that a *pronoia* could consist of any kind of state revenue that had been granted to the beneficiary, including the right to charge duties, tolls, and so forth. However, the principal form of revenue granted as a *pronoia* was that which came from land, the quantities of which were undoubtedly increased with confiscated and klasmatic lands.

It is not clear at what point the value of the *pronoia* began to be expressed as a

¹⁹⁹ *Lavra*, 1: no. 56, apparatus.

²⁰⁰ *Ibid.*, no. 64, lines 62–64.

²⁰¹ Choniates, 208–9; cf. Magdalino, *Manuel*, 176.

²⁰² *Lavra*, 1: nos. 64 (1162) and 65 (1181).

number of nomismata, which was the theoretical revenue on the land and was later called the *posotes* ("quantity"). No mention of the *posotes* is made in the few documents that have survived from the twelfth and the early thirteenth century. Moreover, a model *praktikon* for the handing over of *paroikoi* to a soldier-beneficiary (*pronoia* holder), which seems to date from the first half of the thirteenth century, makes no mention of the "quantity" of money the beneficiary would collect; the references are only to *zeugaria* of land (the amount that could be plowed by a pair of animals in a day) to be taken from other *pronoia* holdings, together with their farmers and their domestic animals.²⁰³ There is no mention even of tax exemption, as there had also been no such reference in the case of one of the estates (Mesolimna) granted to Leon Kephalas in 1084. Such an arrangement was only natural, for the land conceded belonged to the state, whose revenue from it consisted largely of rent (and not tax, which was collected on private property). The *pronoia* holder was acting as a temporary substitute for the state and, once in possession of the land, would collect on it what the state had previously been entitled to collect. It seems highly likely that under this system all or nearly all the payments (with the exception of personal tax, of course) were made in kind.

There can be no doubt that estates were also granted with complete tax exemption within the *pronoia* system. The *akritai* (border guards) of Asia Minor lived on the land they owned without paying any tax; some of them also held *pronoia* land, and received gifts in cash from the emperor, in return for which they served in the army and protected the area where they lived. There is no written record, at least as far as the *akritai* of Asia Minor are concerned, of the sum to which their fee amounted.

The case of these *akritai*, who could be classed somewhere between the owners of military land and the holders of *pronoia* land (since the land belonged to them, while at the same time they enjoyed complete tax exemption), is rather better known to us, since Michael VIII Palaiologos suddenly changed their status shortly after 1261. The civil servant Chadenos, who was probably a tax farmer, "enlisted" (*estrateuse*) the *akritai* on the basis of the property they owned, leaving each of them with a *posotes* (συμποσός) of 40 nomismata and collecting the balance of the tax for the state. On the other hand, the *akritai* were to receive an annual salary, *roga*, which would supplement their income and serve as an incentive to them to accompany the emperor when he engaged in military operations.²⁰⁴ In this way, equality among the various *akritai* was achieved because they were all left with the same *posotes* in the form of tax exemption and they all collected a *roga* that would help them to pay in cash any tax they might owe over and above the 40 nomismata. I suspect that at this time the *roga*, too, must have been

²⁰³ N. Oikonomides, "Contribution à l'étude de la *pronoia* au XIII^e siècle: Une formule d'attribution de parèques à un *pronoiaire*," *REB* 22 (1964): 158–75. The absence of even the slightest mention of the *posotes* led me at the time to hypothesize that the *praktikon* was a preliminary document that would be filled in at some later date, but now I believe that the interpretation presented here is both simpler and more likely.

²⁰⁴ George Pachymeres, *Relations historiques*, ed. A. Failler (Paris, 1984), 1–33; N. Oikonomides, "À propos des armées des premiers Paléologues et des compagnies de soldats," *TM* 8 (1981): 359–60; M. Bartusis, *The Late Byzantine Army: Arms and Society* (Philadelphia, 1992), 54–55.

around 40 nomismata, a hypothesis I base on the fact that, as we shall see, the total *posotes* of a *pronoia* in the fourteenth century was approximately 80 nomismata, of which only half was paid out in cash.

This text by Pachymeres contains the first reference to the *posotes* of the *pronoia*, but we can presume that the institution was already in existence and that Chadenos, in his case, would have been applying measures that were familiar from the management of the *pronoia* in the rest of the empire. In 1272 the *pronoia* of each soldier was calculated in cash, with increments of between 24 and 36 nomismata for any soldier who distinguished himself.²⁰⁵ We also encounter instances of very large *pronoiai* for senior officials, whose *posotes* comes to hundreds of nomismata.²⁰⁶ By the first half of the thirteenth century, therefore, the *pronoia* had become economic—almost monetary—in nature.

The economic composition of the *pronoia* belonging to a heavy cavalryman in the fourteenth century, such as those who served in the *mega allagion* (regiment) of Thessalonike in the fourteenth century, is known to us from some of the *praktika* of *pronoia* holders that have survived.²⁰⁷ There are variations (70, 72, and 80 hyperpyra) in the level of the *posotes* to be collected by the three cavalrymen in the imperial bodyguard on whom we have information. These fluctuations seem reasonable in view of the differences they may reflect in the manner in which the men were recruited, their seniority, how distinguished their service had been, and so on.

The *praktika* of the beneficiaries of the *pronoiai* are structured in a manner similar to those of other landowners. According to the *praktikon*, the revenue of the *pronoiaris* consisted of two parts. The first was the *oikoumenon*, that is, the sum of all the personal taxes paid to the *pronoia* holder by his *paroikoi* resident on the *pronoia*, depending on the means of production at the disposal of each *paroikos*. The *oikoumenon* was most probably collected in cash. In the event of the state being unable (or unwilling) to grant the *pronoia* holder a sufficient number of *paroikoi* to make up the *oikoumenon*, this could be done with the granting of pieces of land or other rights (leasing rights on vineyards, grazing ground, fishing grounds, etc.), which were calculated at only two-thirds of their real yield and were described as ἀντὶ οἰκουμένου (“in place of the *oikoumenon*”).

²⁰⁵ A. Heisenberg, “Aus der Geschichte und Literatur der Palaiologenzeit,” *Sitzungsberichte der Bayerischen Akademie der Wissenschaften. Philosophisch-Philologische und Historische Klasse* 10 (Munich, 1920), p. 40, lines 78–81. It is interesting that the increments were calculated in multiples of 12 nomismata.

²⁰⁶ E.g., *Actes de Docheiariou*, ed. N. Oikonomides, Archives de l'Athos (Paris, 1984), no. 9.

²⁰⁷ The *praktikon* of Michael Monomachos (1333; *Zographou*, no. 29) was issued when part of his large *pronoia* was converted into a hereditary estate; see the commentary by Ostrogorsky, *Pour l'histoire de la féodalité byzantine*, 112ff, 347–56. See also the similar *praktikon* of John Margarites, published by P. Lemerle in “Un *praktikon* inédit des archives de Karakala (janvier 1342) et la situation en Macédoine orientale au moment de l'usurpation de Cantacuzène,” in *Χαριστήριον εἰς Ἀ. Ὁρλάνδον* (Athens, 1964), 278–98. The first true *praktikon* of a *pronoia* holder, Manuel Berilas (1323), was published by P. Schreiner, “Zwei unedierte *Praktika* aus der zweiten Hälfte des 14. Jahrhunderts,” *JÖB* 19 (1970): 34–35; cf. N. Oikonomides, “Notes sur un *praktikon* de *pronoiaire* (juin 1323),” *TM* 5 (1973): 335–46. Two more *praktika* of beneficiaries, dated 1321—Michael Savenzes and Nicholas Maroules—were published in *Xénophon*, nos. 16 and 17. Cf. Bartusis, *Late Byzantine Army*, 169ff.

The *oikoumenon*, as guaranteed revenue in cash, was thus the most important part of the income of the *pronoia* holder. Usually, though not always, it corresponded to half (or almost half) of the total *posotes*.

The second part consisted of secondary taxes and rights (e.g., on fishing, the *ennomion*, and the tax on flax-retting units), but above all of land, on which, theoretically, the full tax was payable (at the rate of one hyperpyron for every 50 modioi of arable land, just the same as for other landowners). However, the *pronoia* holder enjoyed complete tax exemption, that is, he received a statement to the effect that he would not be required to pay the tax that, as a landowner, he owed. This sum in tax, from which he was exempted, was the second part of the *posotes* of the *pronoia*. At the end of the *praktikon* a reference was made—as in the case of all landowners—to some days of corvée (usually twelve per year) on which each *paroikos* was obliged to work, providing such true service as he was capable of, for his master.

This, of course, did not amount to real income. The *pronoia* holder could cultivate the arable land directly (perhaps using the days of corvée that his *paroikoi* owed him), or he could rent it to them or to third parties and collect the rent in money or in kind, under the arrangements described above. Consequently, the *pronoia* holder's real income differed from that stated on his *praktikon* and would depend on how well he was able to manage his land and how fierce, in the specific region, was the competition for the working hands available. The granting of land in place of the *oikoumenon* at two-thirds of its real yield and the frequent references to *exaleimmata* (escheat) seem to me to indicate that in Macedonia in the early fourteenth century there was more land available than there were hands to work it. A similar conclusion can be drawn from the consideration that quasi-ownership of land was not assessed in calculating the *posotes*, as if the state did not count on collecting any revenue as the owner. I would thus tend not to be very optimistic about the degree to which the *pronoia* holders were able to realize the economic potential of their land.²⁰⁸ What I do, however, regard as certain is that at least part of their income was collected in kind.

The *pronoia* of the fourteenth century can thus be seen to share many of the features of the measures implemented by Chadenos in 1261. One part of it consisted of cash (a *roga* in the case of Chadenos, the right to direct collection of the tax on *paroikoi* in the case of the 14th-century *pronoia* holder). The other part consisted of land: the beneficiary occupied the role of owner (of quasi-owner in the case of a *pronoia* holder, since he did not have the right to transfer its ownership permanently),²⁰⁹ collected whatever rights the owner was entitled to (most probably in kind), and was exempt from tax.

Since the *posotes* of the *pronoia* consisted, in effect, of the tax (and not of the rent) that the land would have borne, it is natural that we should encounter *pronoiai* that consisted of the revenue the state would normally seek from the beneficiary and that it ultimately ceded to him in return for the provision by him of a certain service. In other words, the *pronoia/oikonomia* might be in the form of a simple tax exemption.

²⁰⁸ The estimate proposed by Bartusis, *Late Byzantine Army*, 173, strikes me as excessively optimistic.

²⁰⁹ Though he could transfer it for such time as he held his *pronoia*; cf. *Docheiariou*, nos. 13 and 14.

Such cases are rare,²¹⁰ since in accordance with the calculations given above there would be less profit for the beneficiary in simple tax exemption than there would be in the granting of land with those who were cultivating it, constituting a new quasi-property. On the other hand, it would have the advantage of being hereditary, which was one of the main ambitions of the *pronoia* holders as far back as the second half of the thirteenth century. However the case may be, it is certain that the *apographeis* of the fourteenth century used the terms *oikonomia* and *poson* in connection not only with *pronoiai* but also with monastic land, which was undoubtedly owned by the foundations in question. There are references, too, to monastic *pronoiai*.²¹¹

There were *pronoiai* of all types and sizes: some that represented the full fee paid to a soldier or an employee of the state, others that corresponded only to part of that fee and were supplemented by a *roga*. The *pronoia* was usually granted to a single soldier, but sometimes it was conceded to two or five, or even to an entire company of soldiers, who would share out the real income they collected, and not just the nominal *posotes*.

Privileged treatment, then, was a general phenomenon. When the land was actually owned by its proprietor, as in the case of monastic lands, the monetary character of the privilege is easier to distinguish. The *apographeus* records the land, the *paroikoi* with their animals, and the other income from the land, determines the total tax owed (noting whether there had been any increase or reduction), and states at the end of the document what was to be done with this state revenue (i.e., the tax). As examples, I shall use two *praktika* issued by the same *apographeus*, John Vatatzes, in the same month (April 1341), and for the same beneficiary, the monastery of Iveron.²¹²

The first *praktikon* concerns land in the region of Thessalonike on which there was complete tax exemption: the registrar states that the income on the land (633 hyperpyra) ὀφείλει κατέχεσθαι (“is to be kept”) by the monastery. This means that when there was complete tax exemption, the state was not interested in the settlement that the monastery and its *paroikoi* might reach. It contented itself with saying that it had no claim on the monastery.

When the tax exemption was partial, things were different. The second *praktikon* concerns land in the *katepanikion* of Zavaltia on the Strymon River. Here the registrar states the total tax revenue—448 hyperpyra—and adds that 200 *hyperpyra* would be claimed from the monastery and paid into the public treasury as tax (ἀπαιτεῖσθαι παρὰ τοῦ μέρους τῆς . . . μονῆς καὶ εἰσκομίζεσθαι πρὸς τὸ μέρος τοῦ δημοσίου ὡς κεφάλαιον), while the remainder would be retained by the monastery.

There can be little doubt that landowners attempted to collect all the money to which they were entitled as tax from their *paroikoi*. The state confined itself to determining how much tax should be paid. However, its own demands were expressed as a number

²¹⁰ For one in the 14th century, see N. Oikonomides, “The Properties of the Deblitzenoi in the Fourteenth and Fifteenth Centuries,” in *Charanis Studies: Essays in Honor of Peter Charanis*, ed. A. E. Laiou-Thomadakis (New Brunswick, N.J., 1980), 178–79.

²¹¹ *Zographou*, 53.

²¹² *Iviron*, nos. 86 and 87.

of hyperpyra, which, as tradition required, it claimed from the owner of the estate, who was obliged to collect it from the *paroikoi*. Landowners were treated by the state much as were the *pronoia* holders, the only difference being that landowners were often required to pay tax, or a part of the tax.

The granting of privileges and complete or partial tax exemption to landowners, especially to monasteries—whose holdings of land increased dramatically, as one can see in Macedonia thanks to the archives of Mount Athos—substantially reduced state revenue. Over time, and as the result of a mentality that favored donations to such institutions (apart from saying prayers for the emperor, the monasteries could provide him with much more practical assistance in the sphere of propaganda, particularly in times of political instability), the revenue of the state dropped to such a low level that efforts were made to reduce the privileges and bring the economic capacity of the agricultural sector at least partly back into the service of the public economy.

The *pronoia* system itself also displayed a tendency to cause privatization of the revenue that was under state control. Before long, a natural trend to gain hereditary rights on the source of their income manifested itself among the *pronoia* holders. Michael VIII seems to have been generous in granting the right to exploit the *pronoia* to two generations, that is, to the *pronoia* holder and his son,²¹³ who, however, would also have to serve in the army. After the death of the son, the *pronoia* would return to the state, and so the system remained intact. As time passed, however, and within the rationale of the privilege system, *pronoia* land came to be granted, in exceptional cases, as the hereditary property of the beneficiary. This occurred especially frequently during the civil wars of the fourteenth century, when the state's land assets shrank significantly. The general slump that ensued compelled the state to carry out repeated acts of confiscation of ecclesiastical and monastic property in order to distribute it as *pronoiai*; after 1371, for instance, the government distributed to *pronoia* holders "half the land of the monasteries of Athos and Thessalonike." In practice, this measure meant that the monasteries, which until that time had enjoyed complete tax exemption, were now obliged to pay to the *pronoia* holders assigned to them one-half of the tax that would ordinarily have been paid on their land.²¹⁴ The manner in which these confiscations took place is indicative of the extent to which the *pronoia*, seen from the side of the state, was a fundamentally economic institution. It functioned in a way that was closely bound up with the general system of taxation on agricultural production.

The State as Landowner

The long-standing tradition of imperial estates survived until the end of the empire, since, of course, there was always a need for procurements in kind to supply the palace and the public sector more generally. However, one can see that by as early as the twelfth century a significant proportion of these estates had been distributed to private

²¹³ *Docheiariou*, no. 13.

²¹⁴ Bartusis, *Late Byzantine Army*, 169.

citizens, very probably in the form of *pronoiai*. Large farms were also granted, as sources of income, to members of the imperial family, making them a kind of *pronoia* on the grand scale whose limitation to a life interest, though not stated from the start, was nonetheless dictated ipso facto.

The two documents that describe the administrative and economic structure of the empire before the Fourth Crusade—the chrysobull of 1198 in favor of the Venetians and the *Partitio Romaniae* of 1204²¹⁵—refer to numerous *episkepseis* belonging to the state or important families (the Vranas and Kantakouzenos families and kinsfolk of the emperor) scattered across the empire, from Skopje to the Peloponnese and from the environs of Constantinople to Asia Minor. These holdings seem to have been so extensive that they were regarded as comparable to themes (provinces), and they were certainly administratively independent.

One is left, to put it another way, with the impression that of the landed property belonging to the state, which had been increasing without interruption since the eleventh century, the emperors retained and operated certain very large farms, distributing the medium-sized estates that lay between these holdings in the form of privileges, usually to *pronoia* holders. This option may have been the result of a desire to achieve efficient management.

After the fall of Constantinople in 1204, the emperors of Nicaea found themselves with large stretches of land at their disposal in western Asia Minor. Apart from the traditional imperial estates, this land consisted of the property, now without an owner, of the large ecclesiastical foundations of Constantinople (Hagia Sophia, the patriarchate, the major churches and monasteries), which had fallen into the hands of the hostile Latins. The means of production now in the hands of the state enabled emperors as early as Theodore I Laskaris to distribute *pronoiai* and even large estates to senior officials—in other words, he was given the means to implement an old fiscal policy using fresh resources.²¹⁶ This redistribution of land was completed by his successor, John III Vatatzes.

The policy of that emperor stands out for his desire—for the first time, and as part of his overall policy—to set up model imperial farms, the *zeugelateia*,²¹⁷ whose purpose was to ensure that the empire was self-sufficient in foodstuffs. This promotion of agricultural production also extended to the “powerful”—to the aristocrats and the ecclesiastical and charitable foundations—who were encouraged and supported by the emperor in improving their production. Support was granted for investments, and efforts were made to optimize production. The sources talk of an abundance of produce of all kinds and of the sudden enrichment of the subjects of the empire when a

²¹⁵ For these documents, see the detailed commentary by D. Zakythinos, “Μελέται περὶ τῆς διοικητικῆς διαιρέσεως καὶ τῆς ἐπαρχιακῆς διοικήσεως ἐν τῷ Βυζαντινῷ κράτει,” *ΕΕΒΣ* 17 (1942); 18 (1948); 19 (1949); 21 (1951); 22 (1952); and 25 (1955), and especially the index on pp. 204–9 of the last part.

²¹⁶ H. Glykatzī-Ahrweiler, “La politique agraire des empereurs de Nicée,” *Byzantion* 28 (1958): 51–66, 135–36.

²¹⁷ Cf. *Nicephori Gregorae Byzantina historia*, ed. L. Schopen and I. Bekker, 3 vols. (Bonn, 1829–55), 1:41ff (hereafter Gregoras), and Laiou, “Agrarian Economy,” 314.

famine struck the neighboring sultanate of Ikonion. They also speak of the ideological background the emperor himself was attempting to give to the agricultural economy and to his policies when he had a precious crown made for the empress and called it the *oaton*, because, as he claimed, the money for it had come from selling the eggs (*oa*) produced on his farms. We are thus dealing with a global approach to the agricultural economy. Unfortunately, however, we do not know what more specific measures were implemented, especially on the technical level.

This policy does not seem to have been followed through, principally because in 1261 the imperial seat returned to Constantinople and reassumed the international ambitions of earlier times. More progress was made in the decentralization of land exploitation and in the granting of land to people other than the emperor. The emperors participated little, and only sporadically, in the development of the agricultural economy, doing so in order to benefit from opportunities to invest public money in obtaining the security against the Turks for which they yearned. The results of these efforts were scanty and, in any case, short-lived: in the early fifteenth century, for example, John VII fortified Kassandra and distributed among the monasteries the revenue he had obtained by setting up new *zeugaria* there at his own expense.²¹⁸

The State, Trade, and the Privileges of the Italians

The last four centuries of Byzantine history coincide with the rapid development of trade on an international level and with the leading role played in that field by the maritime cities of Italy, and by Venice and Genoa in particular. Where the revenue of the Byzantine state is concerned, a significant role was played by the tax exemptions granted first to the Italians and later to other merchants from the West; as the turnover of these beneficiaries increased, so did the amount of revenue lost by the state.

The principal item of state revenue from the levying of duties on movements of goods and trade in them had, since the middle Byzantine period, been the *kommerkion* (or *dekaton*, "tenth"), which corresponded to 10% of the value of the merchandise.²¹⁹ This rate remained unchanged at least from the eighth century to the fourteenth, despite the privileges attained with respect to it first by the Venetians and later by many other Latin merchants. It was not until around 1349 that John VI Kantakouzenos brought the *kommerkion* down to 2% in order to equalize the demands of the customs authorities in Constantinople with those of the other customs houses of the

²¹⁸ Cf. *Dionysiou*, no. 10, and *Actes de Xéropotamou*, ed. J. Bompaire, Archives de l'Athos (Paris, 1964), no. 28.

²¹⁹ For the *kommerkion* and the other charges on merchandise to which reference is made below, see, principally, H. Antoniadis-Bibicou, *Douanes*. For the privileges of westerners and Byzantine reaction to them, see R.-J. Lilie, *Handel und Politik zwischen dem byzantinischen Reich und den italienischen Kommunen Venedig, Pisa und Genua in der Epoche der Komnenen und der Angeloi, 1084–1204* (Amsterdam, 1984), and the relevant particulars, and the bibliography in N. Oikonomides, *Hommes d'affaires grecs et latins à Constantinople, XIII–XV s.* (Montreal, 1979), 41ff.

area, and especially with the rates charged by the Venetians and Genoese (see below). Until the early thirteenth century, we also find references to the *pratikon*, a sales tax,²²⁰ which might be another name for the *kommerkion*.

Another separate duty, on the order of 10%, was called the *dekateia* or *dekatos* of the *oinara* or *oinaria*. As the name, derived from *oinos*, indicates, this was charged on the transportation and sale of wine, one of the most important cash crops. This tax would seem to have been particularly important in the late twelfth century and to have been one of the taxes from which it was hardest to gain exemption.²²¹ It is not clear in what respects this duty differed from the *kommerkion*, apart from the fact that since it bore a separate, special name, it was not necessarily included among general tax exemptions. In other words, the *dekateia ton oinarion* may have been a way of getting around the privileges that had been granted to the Italians. But nothing can be said with certainty.²²²

These *dekateiai* seem to have been the principal charges on trade goods. Ships bore *corvées* on behalf of the state, such as the compulsory transportation of grain and other items to Constantinople (*emblemis kokkou, siteron, stravoxyles*, etc.). They were also obliged to carry certain people (such as those being sent into exile) or commodities, or buy out this obligation (paying the *naulon* or *antinaulon*). Along with these, perhaps, one should make a note of the *emblemikion* and the *ekblemikion*, which may have been connected with imports and exports of goods on behalf of the state. These obligations were not related to commerce *per se*, but probably had to do with the ownership of a vessel—even one as small as a fishing boat—and they could be compared with the various *corvées* that were obligatory on land.

There were also, however, a number of smaller contributions that merchants paid on a circumstantial basis and that were usually the revenue of the local authorities. I make a note of this here because in effect these contributions were indirect state revenue, since the employee who collected them relieved the state of the requirement for any other charges. Reference to these contributions are widely scattered over space and time, and no systematic study of them—which would allow us to say whether some of them were peculiar to a particular period or a particular place—has been carried out: (a) gratuities to representatives of the provincial administration—such as the *kani-skion*, *synetheia*, *archontikon*, and the *ekprosopikion*—which might be levied from any citizen who had dealings with representatives of the state and were not confined specifically to merchants; (b) contributions collected from those who used controlled passes

²²⁰ *Basilics*, 6.28, ὁ ὑπὲρ πρασίμων φορτίων παρεχόμενος κανών (the charge levied on cargoes for sale). The fact that the *pratikon* is mentioned in documents along with the *kommerkion* should not be seen as precluding this interpretation, since in tax exemptions there was a tendency to give the same tax various names in order to maximize the protection afforded to the beneficiary.

²²¹ See Lemerle, “Notes sur l’administration byzantine,” 271 (see note 152 above); cf. Antoniadis-Bibicou, *Douanes*, 103–4.

²²² It should be noted that there was also a *dekateia* on flaxseed (Ἐγγράφα Πάτμου, 1: no. 11, line 27), but the reference seems to be to a specific case.

or the infrastructure, such as the *diabatikon* (Latin: *pedagium*) (charged on persons and animals), the *poriatikon* (on river crossings), the *katartiatikon* (which was the right to moor in a harbor), the *limeniatikon* (the right to drop anchor there), and the *skaliatikon* (the entitlement to use a landing stage). It needs to be added that these tolls were paid principally by merchants and not by all travelers. As can be seen from the narrative of Clavijo,²²³ they were not paid by ambassadors; (c) charges for the official measurement or weighing of merchandise in order to protect the public and the state, which could be sure it was actually collecting that to which it was entitled. These charges included the *mesitikon*, the *miniatikon*, *metretikion*, the *zygastikon*, the *kambaniatikon*, the *gomariatikon*, and the *samariatikon*. One of the privileges to which the foreign merchants laid claim was the right to use their own system of weights and measures; (d) monopolies, that is, the obligation on the importer to wait for a set period of time before beginning to sell his goods (e.g., wine), thus allowing the local lord to sell his own merchandise first.

The total cost of these special charges does not seem to have been particularly great, but it could become onerous if the demands were arbitrary. Instances of high-handed extortion were easier along the roads than they were in the ports or at the landing stages, where the presence of the central authorities was more perceptible.

These charges, which could vary from place to place and time to time, were paid by merchants who were Byzantine citizens. Things were different for the foreigners, and especially the Italians, who were particularly successful in extracting privileges and benefiting from them during the last centuries of Byzantium. Moreover, when the foreigners established themselves, Constantinople ceased to be a separate economic zone and was easier of access even for the citizens of the empire; thus yet another feature peculiar to Byzantium, which had functioned effectively for centuries, ceased to exist. Monastic ships acquired the right to dock in the capital without paying tax. Now there were Byzantines of great wealth in Constantinople, whose riches the state may have had designs on but who were too powerful, thanks to the support of their fellow merchants, for the emperor's attempts to confiscate their property to have any chance of success. One famous example is that of Kalomodios, who had grown rich in long-distance trade as practiced by his Venetian and Genoese colleagues.²²⁴ In the twelfth century, the state's revenue from the revitalized trade economy seems to have been substantial, and certainly much greater than it had been in the tenth century. Perhaps this may explain why, despite the loss of territory in Asia Minor, the state of the Komnenoi appears wealthy for its time; it possessed large sums in cash and experienced no particular difficulty in financing a costly foreign policy and maintaining an even more expensive army of mercenaries. It was not until the closing decades of the twelfth century that Byzantium displayed any evidence of economic weakness.

Foreign merchants—western Europeans, Russians, and Bulgarians—were always present in Constantinople and were usually covered by treaties defining their rights

²²³ Clavijo, *Embassy to Tamerlane, 1403–1406*, trans. G. Le Strange (London, 1928), 119.

²²⁴ Choniates, 233.

and obligations. They often received treatment that was hardly privileged, and there were usually restrictions on the goods they were entitled to export, especially the precious silks. However, in the eleventh century the situation changed drastically, and for the first time the foreign merchants received privileged treatment that put them in a position of clear advantage over the Byzantines.

The Venetians had enjoyed privileges in connection with the duty on their imports and exports in the Constantinople area as early as the tenth century. In 992 these privileges were extended,²²⁵ but they remained limited and under the clear control of the Byzantine authorities. A substantial change occurred in 1082, when, under pressure from the Normans, Alexios I granted the Venetians the right to settle permanently in Constantinople and other cities around the empire, trading in whatever goods they pleased and without paying the traditional duty of 10% (the *kommerkion*).²²⁶ Later, privileges were granted to Pisa (1111) and Genoa (1155): they paid no *kommerkion* on the gold they imported (proof of the demand for that precious metal in the empire), 4% (instead of the traditional 10%) on imported goods, and 10% on the merchandise they exported. The history and true extent of these privileges are the subject of a continuing debate, especially in connection with the question of whether the lists of place names in the documents are of an indicative nature or were restrictive; in the first instance, the privilege would apply to the entire empire and the places in which there were already significant Venetian interests would be mentioned by name, whereas in the second the privilege would apply only in the places mentioned by name in the documents, which strikes me as being the more likely version.²²⁷

The Byzantine state attempted to abolish or circumvent the Venetian privileges by demanding that those who purchased from them pay the full *kommerkion*, thus restoring state revenue and also restricting the competitiveness of the Venetians by comparison with other merchants (especially the locals). Although these efforts came to nothing, since the Venetians reacted dynamically, Byzantine officials continued throughout the twelfth century to exact as much as possible from privileged foreigners. This policy culminated in the detention of the Venetians throughout the empire in 1171, with the simultaneous confiscation of their property, and in the massacre of the Latins of Constantinople in 1182. The first of these measures, though arbitrary, was extremely well organized by the state; the second was left to the mob of Constantinople, with the state turning a blind eye. Neither had much effect in the long run.

It would seem that initially, before it caused a general outcry, the presence of the Latin merchants in Constantinople had a beneficial effect on the trade economy, which it succeeded in revitalizing. The Byzantine sources single out for comment the presence in the city of numerous merchants from the West and the East, along with whom

²²⁵ Zepos, *Jus*, 1:260–61.

²²⁶ *I trattati con Bisanzio*, ed. M. Pozza and G. Ravegnani (Venice, 1993), 35–45; cf. Laiou, “Exchange and Trade,” 751–52.

²²⁷ Cf. D. Jacoby, “Italian Privileges and Trade in Byzantium before the Fourth Crusade: A Reconsideration,” *Anuario de estudios medievales* (Barcelona) 24 (1994): 349–69 (with the earlier bibliography).

the local traders also grew rich. The state lined its pockets, too. Benjamin of Tudela confirms that Manuel I Komnenos had an income of 20,000 gold coins per day from the rent of commercial premises in Constantinople and the levying of duty on trade.²²⁸ Unfortunately, there is no way of checking the accuracy of this figure, which tallies, however, with the overall picture we have of the empire in the twelfth century: beyond doubt, it was a rich state, able to spend large sums in cash and capable of financing the arrogant “global” policy of Manuel I, which, however, brought it to its knees financially.

Another attempt to put an end to exploitation by the Italians took place at the time of the empire of Nicaea, when John Vatatzes adopted a policy of economic protectionism and forbade his subjects to purchase imported luxury goods; they were to content themselves with “such things as the land of the Romans can grow and such things as the hands of the Romans can make.”²²⁹ This policy, which was comparatively effective and which is seen as having made a substantial contribution to the prosperity enjoyed by the empire of Nicaea, was soon abandoned; more specifically, it was dropped when Constantinople was recaptured in 1261.

In the time of the Palaiologoi, two major economic powers from the West established themselves in Constantinople. By the treaty of Nymphaion of 1261, the Genoese were invited into Byzantium in the hope that they would set themselves up in opposition to the Venetians. After negotiations, they settled at Galata, on the other side of the Golden Horn, and founded a colony of their own that was governed by a *podestà*. Over time, the Genoese, who paid nothing to the Byzantine emperor, came to have considerable control over all the trade of the Black Sea.²³⁰ The Venetians, too, despite their initial opposition to the reestablishment of Byzantine government in Constantinople, soon signed a treaty with the emperor (1265) by which they regained their own quarter of the city, their harbor facilities, their complete exemption from tax, and their administrative autonomy under a *bailo* of their own.²³¹

The Genoese continued to be allies of the Byzantines as long as their privileges were not threatened; later, when their interests shifted, they supported the Ottomans. The Venetians, by way of contrast, often linked the renewal of their treaty with Byzantium to the progress of negotiations between Constantinople and Rome on the union of the churches, thus creating political problems for the empire. However, they always succeeded in retaining their privileges. Political criteria can therefore be seen to have influenced the trade economy in Palaiologan Byzantium.

Both the Venetians and the Genoese charged very low rates—1–2%—for duties and the use of their port facilities. They were thus able to attract a significant part of international trade, compelling the emperor to adopt a similar policy in order to reinforce the economic life of Constantinople with other western merchants. As a result, the

²²⁸ *The Itinerary of Benjamin of Tudela*, ed. M. N. Adler (London, 1907), 13.

²²⁹ Gregoras, I:43.

²³⁰ See M. Balard, *La Romanie génoise, XIIe–début du XVe siècle* (Rome–Paris, 1978).

²³¹ F. Thiriet, *La Romanie vénitienne au Moyen-Âge* (Paris, 1975); J. Chrysostomides, “Venetian Commercial Privileges under the Palaeologi,” *StVen* 12 (1970): 267–356.

number of western European merchants in Constantinople gradually increased. These traders used the Byzantine port facilities and paid the emperor only 2–3% on their imports and a similar rate on their exports. They came from Pisa,²³² Florence,²³³ Provence,²³⁴ Catalonia, Sicily,²³⁵ Ancona,²³⁶ and elsewhere.

The Byzantine economy of exchange became increasingly bound up with the large enterprises belonging to the Italians, while the state tried to ensure that Constantinople was supplied with at least the bare essentials. For that reason, it prohibited exports of wheat from the city if the price had risen to more than one hyperpyron (later half a hyperpyron) per modios. It was unable to implement these measures effectively.

The Italian ports of Constantinople itself handled most of the trade. Nikephoros Gregoras tells us that in the mid-fourteenth century the Genoese were collecting 200,000 gold pieces from their customhouse at Galata, whereas the customs of Constantinople were barely taking in 30,000.²³⁷ These figures may be exaggerated,²³⁸ but they give a picture of economic and fiscal activities on the two sides of the Golden Horn at this time. The difference on the economic front becomes even greater when we remember that the Byzantine *kommerkion* was 10%, not 1–2%, and that Gregoras' comparison does not take any account of the Venetians, who had the same privileges as the Genoese and conducted a similar volume of business.

Things had reached an extreme point when Emperor John VI Kantakouzenos, who had just gained the upper hand in Constantinople following a disastrous civil war, decided that the time had come to take measures to support Byzantine entrepreneurs. He introduced a special tax on imported wheat and on wine. These were bulk commodities, traded on a large scale, whose import into Constantinople was controlled to a significant extent by the Genoese. Most important of all, he lowered the Byzantine *kommerkion* to 2%, probably in 1349.²³⁹ But by now it was too late to turn the clock back, particularly since Byzantium emerged defeated from the war with Genoa that followed. The Byzantine economy of exchange was to remain until the end dependent on the Italian economy, and the public revenue on it continued to be severely restricted.

An Invisible, Ever-Diminishing Budget

The public economy of the last four centuries of Byzantium was notable for its reduced, though ever-present, degree of political centralism and for its economic decen-

²³² F. Dölger and P. Wirth, *Regesten der Kaiserurkunden des oströmischen Reiches*, 2 vols. (Munich–Berlin, 1924–95), nos. 1898, 2053, 2054, 2283 (1261–1305).

²³³ Francesco Balducci Pegolotti, *La pratica della mercatura*, ed. A. Evans (Cambridge, Mass., 1936), 41.

²³⁴ Dölger, *Regesten*, nos. 2513, 2843, 2908.

²³⁵ For the subjects of the king of Aragon, see Dölger, *Regesten*, nos. 2184, 2366.

²³⁶ *Ibid.*, no. 2315.

²³⁷ Gregoras, 2:842.

²³⁸ Some of the accounts of the Genoese colony at Pera have survived and indicate that the takings cannot have been as high as this. There are difficulties in the interpretation of Gregoras' text, and it has given rise to some farfetched theories; see T. Bertelè, "Il giro di affari di Giacomo Badoer," *Akten des XI. Internationalen Byzantinistenkongress* (Munich, 1960), 55.

²³⁹ Dölger, *Regesten*, no. 2945.

tralization. The granting of privileges to Byzantines and foreigners alike meant in effect that the state, in exchange for certain things, was prepared to concede to some other person the right to extract (within set limits) as much money as he could from those who were under the power of the state. In this way, the percentage of commodities collected for the service of the state grew; yet the increased percentage never reached the state, remaining as profit in the pockets of those who provided the state with services. In other words, the collection of revenue intensified at the expense of taxpayers on the basis of private interests, thus increasing not the revenue of the state but the income of privileged private citizens. However, the economic effects of this system were relatively insignificant by comparison with its social impact.

A large proportion of the various state revenues from land (probably the majority of them, after the generalization of the *pronoia* system) was paid directly into the hands of the servants of the state and the agencies of power: soldiers fighting in the emperor's army, aristocrats who surrounded and supported him, monks who prayed and propagandized for him. Later, however, some of this land escaped from state control. Donations, especially those made to the church and the charitable foundations, were acts of magnanimity that were absolutely necessary for the general social recognition of the donor, whether he be the emperor himself or an aristocrat who had acquired what he had, directly or indirectly, by imperial gift. Social pressure on the part of the aristocrats caused the *pronoiai* to be converted into hereditary property, a phenomenon that increased in frequency during the fourteenth century; from that point on, it was only a matter of time until the ownership of part of that property was transferred to ecclesiastical foundations. In one way or another, the amount of land remaining in the direct service of the state gradually dwindled. It was the shortage of state land that led to the "confiscations" of ecclesiastical estates referred to above.

The state continued to have reduced, though always significant, revenue in cash, principally from the cities and the customs services but also from its land, some of which was exploited directly and some (that which had not been granted as *pronoia* or was between beneficiaries) taxed by the state itself. The small free landholding, which continued to exist until the overthrow of the empire, bore the greatest part of the fiscal burden.

Collection of the state revenue was carried out by tax farmers, who over time came in effect to be the only tax collectors. In whatever way, the fiscal machinery was self-financing, since all fees were paid directly by the taxpayers.

The state's expenditure was also reduced, since the greater part of the machinery of state was financed directly by grants of privileges or by means of the direct collection of taxes and other state or "parallel" rights. The state's expenditure consisted chiefly of the payment of mercenary soldiers, whether recruited permanently (e.g., the imperial guard) or on a seasonal basis (e.g., the Catalan company), and payments to enhance the prestige of the throne within the empire (public works) and outside it (the payments involved in foreign policy). Seasonal mercenaries represented a major burden for the population of the provinces, whom they looted from time to time in order to

secure better living conditions for themselves. Needless to say, the sufferings of the peasants increased dramatically with the civil wars of the fourteenth century.

The period from the twelfth to the fifteenth century is easy to divide into four parts, each with its own features. Comparison among these periods makes it possible to draw more general conclusions.

The empire in the twelfth century, the period of the Komnenian renaissance, was much smaller than it had been but its ambitions were the same, if not greater. The gradual introduction of the system of privileges accentuated the role of the aristocracy and enabled the state economy to deal successfully with the demands of the times. The ambitious foreign policy of Manuel I was based on large cash reserves,²⁴⁰ but also on increased—almost intolerable—fiscal pressure on the Byzantine taxpayer. This provoked opposition in the provinces, stemming both from the level of the demands issuing from the capital and from the corruption the system was capable of tolerating. Michael Choniates, the metropolitan of Athens, gives a vivid description of the oppression to which taxpayers in the provinces were subjected; in their desperation, these taxpayers looked for salvation to the tyranny of Andronikos I and protested, in vain, to his successors.²⁴¹ The failure of Manuel I led to the fragmentation of the centralized state and to the events of 1204.

The state economy of Byzantium in the twelfth century relied on a broad agricultural base and on an urban economy that flourished, despite the privileges granted to the Italians. Byzantium was still a true great power in the twelfth century.

The empire of Nicaea (1204–61) stuck to the same line as the Komnenoi and wished to reconstruct the Komnenian empire, with the difference that, since it did not possess Constantinople, it was unable to play much of a role in international trade or in the urban economy. Yet it still owned large areas of lands, which enabled John Vatatzes to create a state based on the agricultural economy and protected from international trade. The empire of Nicaea was strong and successful, and it developed the institution of the *pronoia* along the lines laid down in the twelfth century.

When Constantinople was recaptured in 1261, Byzantium was forced once more to play the part of an international power, though no longer a great one, since control of the straits was now questionable and the issue was likely to trigger western threats of a new anti-Byzantine crusade. A significant proportion of international trade was conducted by others under the gaze of the Byzantines, who did not even collect much fiscal revenue from it. The state continued, theoretically at least, to be centralized, but signs of dissolution had crept in: donations to monasteries greatly increased, and the existence of hereditary *pronoiai* had to be accepted. The state never ceased to define its fiscal rights, but it was compelled, more and more often, to cede those rights to others. Despite the loss of Asia Minor to the Turks, the agricultural base of the empire

²⁴⁰ According to Niketas Choniates (p. 97), the great Byzantine campaign in Italy cost approximately 300 kentenaria (2,160,000 nomismata).

²⁴¹ See G. Stadtmüller, *Michael Choneiates, Metropolit von Athen* (Rome, 1934).

was still relatively healthy and was capable of financing large armies. Although the plan of Andronikos II to create a standing corps of 3,000 *pronoia* holders came to nothing, it demonstrates what the state was still capable of and the limits of those capacities.²⁴²

After 1341, with civil wars and the permanent presence of the Turks on European soil, the agricultural base of the empire broke up and its population diminished, as did the means of production to which it had access. In order to lay its hands on some cash, the state pledged the crown jewels to the Venetians; even so, it remained poverty stricken and was compelled, for short-term and questionable gain, to concede ever wider privileges to Byzantines and foreigners. When the emperor pleaded for help against the Turks, he no longer had the means to make courtesy gifts and was reduced to distributing holy relics.²⁴³ The population of Byzantium, in their state of financial oppression, observed that the approaching Ottoman conquerors were able to offer them not only security but also better economic living conditions.

The Byzantine Empire centered on a large city located on the straits; it was ideally situated to control trade and was also a large market for commodities of all kinds. Revenue from Constantinople and from trade could have supported the public economy of the empire, and perhaps did in some periods, such as the twelfth century; even then, however, the state's main source of revenue was the provinces. In reality, the public economy of Byzantium relied above all on land and its exploitation.

²⁴² It has to be said, however, that by the standards of the great monarchies of the 14th century (such as France or England), a force of 3,000 knights would have been a very considerable one.

²⁴³ G. Dennis, "Two Unknown Documents of Manuel II Palaeologus," *TM* 3 (1968): 397–404.

Legal Institutions and Practice in Matters of Ecclesiastical Property

Eleutheria Papagianni

An investigation of the system of law and actual practices in connection with ecclesiastical property is an essential component of an economic history of Byzantium in the middle and late periods (7th–15th centuries) because at that time the church had secured its position among the “powerful” (*dynatoi*) of the empire and its ownership of extensive assets, in particular large estates, had an impact on both the agrarian economy and the legislative policy of the emperors.¹ First, however, it must be noted that most of the legislative arrangements and practices that took shape during and after the middle period concerned monastic property, not ecclesiastical property in the broader sense. This should not be ascribed to any qualitative differentiation between monastic and other ecclesiastical property in the minds of legislators or society at large, but simply to the fact that it was the monasteries that had amassed most of the assets, and immovable property in particular. We are also familiar with the decisive role that monks and monasteries played in Byzantium, a fact that led H.-G. Beck to express the view that as early as the sixth century the empire had “become monasticized.”²

The transformation of the church into a landowner was the outcome of a lengthy

This chapter was translated by John Solman.

¹ The following are basic works of reference for a study of this subject: A. Knecht, *System des Justinianischen Kirchenvermögensrechtes*, (Stuttgart, 1905; repr. Amsterdam, 1963); P. Charanis, “The Monastic Properties and the State,” *DOP* 4 (1948): 53–118 (= idem, *Social, Economic and Political Life in the Byzantine Empire: Collected Studies* [London, 1973], art. 1); E. Wipszycka, *Les ressources et les activités économiques des églises en Egypte du IV^e au VIII^e siècle* (Brussels, 1972); I. M. Konidaris, *Τό δίκαιον τῆς μοναστηριακῆς περιουσίας ἀπὸ τοῦ 9ου μέχρι καὶ τοῦ 12ου αἰῶνος* (Athens, 1979); P. Lemerle, *The Agrarian History of Byzantium from the Origins to the Twelfth Century* (Galway, 1979); L. de Giovanni, *Chiesa e stato nel Codice Teodosiano: Saggio sul libro XVI* (Naples, 1980); S. Varnalidis, *Ὁ θεσμός τῆς χαριστικῆς (δωρεᾶς) τῶν μοναστηρίων εἰς τοὺς Βυζαντινοὺς* (hereafter *Χαριστική δωρεά*) (Thessalonike, 1985); J. P. Thomas, *Private Religious Foundations in the Byzantine Empire* (Washington, D.C., 1987); M. Kaplan, *Les hommes et la terre à Byzance du VI^e au XI^e siècle: Propriété et exploitation du sol* (Paris, 1992); N. Svoronos, *Les Nouvelles des empereurs macédoniens concernant la terre et les stratiotes*, ed. P. Gounaridis (Athens, 1994). For further bibliographical references, see also the notes below, esp. note 23.

² H.-G. Beck, *Das byzantinische Jahrtausend* (Munich, 1978), 207: “Byzanz ist schon im 6. Jahrhundert ‘vermöcht.’”

process of evolution that began even before the triumph of Christianity and its recognition as the official religion of the state; the Christian communities exploited the provisions of Roman law concerning associations to build up assets, primarily out of the contributions of the faithful.³ As soon as the attitude of the state authorities began to become more favorable, ecclesiastical property grew constantly,⁴ benefiting from an advantageous legal framework that allowed ecclesiastical “juristic persons” to accept donations, inherit property even by intestate succession, enjoy longer time limits in the statutory limitation of their claims, and grow rich from the sanctions on property that had been introduced in favor of the church.⁵ On the other hand, although complete fiscal exemption for church lands was never recognized, they received special tax treatment that took the form of relief from the more onerous tax burdens (*munera, epereies*), of *exkouseia* for the *paroikoi*, of the payment of tax in installments, of extensions to the time limits for payment, and so on.⁶

Even at a very early date, the accumulation of all this wealth necessitated the introduction of restrictions on the freedom to manage the ecclesiastical property, a freedom that might easily lead to individuals enriching themselves. As far back as the mid-fifth century, canon 26 of the fourth ecumenical council made compulsory the appointment of an *oikonomos*, a managerial official who was answerable for his acts to the appropriate bishop,⁷ and in 787 the seventh ecumenical council confirmed this arrangement and stressed that the presence of an *oikonomos* was essential in monasteries, too, where he was answerable to the abbot (*hegoumenos*).⁸

In order to provide more effective protection for ecclesiastical property, the laws of both church and state prohibited disadvantageous and unnecessary sales or cessions, of all kinds, of ecclesiastical property. Exceptions could be made only where there was an obvious financial benefit, as in the case of property whose continued ownership by the church was unprofitable, or when the money was to be used for “charitable purposes”: to redeem prisoners, for example, or to help another church in need. A special procedure was applied to transfers of ownership of ecclesiastical property in order to

³ See M. Kaser, *Das römische Privatrecht*, 2d ed. (Munich, 1971), 1:308, and O. Heggelbacher, *Geschichte des frühchristlichen Kirchenrechts bis zum Konzil von Nizäa 325* (Fribourg, 1974), 209–16.

⁴ For the initial stages in this process, see F. Winkelmann et al., *Byzanz im 7. Jahrhundert: Untersuchungen zur Herausbildung des Feudalismus* (Berlin, 1978), 18–22.

⁵ See Knecht, *System*, 73–84, 86–92, 131–33; Konidaris, Δίκαιον, 55–76, 95–107, 111–15, and Kaplan, *Hommes et la terre*, 143–45.

⁶ See F. Dölger, *Beiträge zur Geschichte der byzantinischen Finanzverwaltung, besonders des 10. und 11. Jahrhunderts* (Leipzig–Berlin, 1927; repr. Hildesheim, 1960), 63–64; J. Karagiannopoulos, *Das Finanzwesen des frühbyzantinischen Staates* (Munich, 1958), 202–3; Konidaris, Δίκαιον, 222–36; Kaplan, *Hommes et la terre*, 554–55, 558–60; N. Oikonomides, *Fiscalité et exemption fiscale à Byzance, IXe–XIe s.* (Athens, 1996), 196–211.

⁷ See canon 26, fourth ecumenical council; Kaplan, *Hommes et la terre*, 152–55, 286–89. For details of the post of *oikonomos*, see V. Leontaritou, Ἐκκλησιαστικά ἀξιώματα καὶ ὑπηρεσίες στὴν πρώτη καὶ μέση βυζαντινὴ περίοδο (Athens, 1996), 352–435.

⁸ See canon 11, seventh ecumenical council. For the *oikonomoi* of the monasteries, see also Konidaris, Δίκαιον, 149–53, and idem, Νομική θεώρηση τῶν μοναστηριακῶν Τυπικῶν (Athens, 1985) (hereafter Τυπικά), 205–10.

safeguard the interests of the foundation to which the property belonged. Sales of all kinds had to take place in a certain order, with the movable property being disposed of first, followed by the liquidation of the immovable property, starting with that which brought in the least revenue. The ownership of ecclesiastical things was to be transferred, preferably, to other church foundations, members of the clergy, or farmers, and certainly never to heretics or individuals who played some part in the management of ecclesiastical property or held state or military office in the area in which the immovable property was located.⁹ With the exception of Hagia Sophia and the charitable foundations of Constantinople, state legislation still expressly permitted exchanges of land among churches or monasteries or between them and the “imperial *oikos*.”¹⁰

Ecclesiastical property was inalienable in the general sense, including the charging of the assets with real rights such as mortgages.¹¹ Here, too, however, it was permitted for ecclesiastical things to be mortgaged or pledged in the event of economic need.¹² Separate mention should be made of *emphyteusis*, which was permitted in principle despite the fact that it constituted a real right charged on the property.¹³ Here, too, however, the same restrictions applied to the persons who were allowed to acquire ecclesiastical property in this way,¹⁴ and in the late Byzantine period it would seem that there was a trend for *emphyteusis* to be permitted only on property that was otherwise yielding no revenue.¹⁵ In the special case of property belonging to the churches of Constantinople, the law provided that this might be ceded only to a single person and to “two subsequent heirs” unless the property was “in ruins.”¹⁶ On the other hand, there was also a provision¹⁷ in accordance with which leases of ecclesiastical property might in no circumstances have a duration of more than thirty years. Since not only our sources for the practices employed but also the texts of the laws themselves contain information suggesting that the concepts of leasing (a personal right or right *in personam*) and *emphy-*

⁹ See, in the first instance, Novel 120 = *Bas.* 5.2.1–13; *Hexabiblos*, app. 4, 23; canons 26, 33, council of Carthage (with the commentaries of Zonaras, Balsamon, and Aristenos: Rhalles and Potles, *Σύνταγμα* 3:366–68, 390–92); canon 12 of the seventh ecumenical council (with the commentaries of Zonaras, Balsamon, and Aristenos: Rhalles and Potles, *Σύνταγμα* 2:592–611), and *Nomokanon in XIV Titles*, 10.4 (Rhalles and Potles, *Σύνταγμα* 1:239). See also the lengthy analysis of Konidaris, *Δίκαιον*, 254–58, and E. Papagianni, *Ἡ νομολογία τῶν ἐκκλησιαστικῶν δικαστηρίων τῆς βυζαντινῆς καὶ μεταβυζαντινῆς περιόδου σέ θέματα περιουσιακοῦ δικαίου* (Athens, 1992), 1:265–66.

¹⁰ See, in the first instance, Novel 120.7 = *Bas.* 5.2.7; Konidaris, *Δίκαιον*, 201–6, and Papagianni, *Νομολογία*, 265–66.

¹¹ See Konidaris, *Δίκαιον*, 254.

¹² See Novel 120.4 = *Bas.* 5.2.4, and cf. Papagianni, *Νομολογία*, 258–59, 262, 266–67.

¹³ *Emphyteusis* was one of the most onerous rights that could be placed on something belonging to another person—since it gave the *emphyteutes* the rights of free use of and profit from the thing, the sole restriction being that the thing should be returned unimpaired—and it was both heritable and alienable. For a bibliography on *emphyteusis*, see Konidaris, *Δίκαιον*, 196 n. 1, and Papagianni, *Νομολογία*, 210 n. 3.

¹⁴ See Konidaris, *Δίκαιον*, 197–98.

¹⁵ See Papagianni, *Νομολογία*, 265.

¹⁶ See, in the first instance, Novel 120.1 = *Bas.* 5.2.1; *Hexabiblos* 3.4.4; see also Konidaris, *Δίκαιον*, 195–201.

¹⁷ Novel 120.3 = *Bas.* 5.2.3; *Hexabiblos* 3.4.7.

teusis (a real absolute right or right *in rem*) were not always distinguished with complete exactness,¹⁸ the only general conclusion that can be stated here without risk of arbitrariness is that the ceding of the exploitation of ecclesiastical property could not be agreed to be *in perpetuum* but only as “subject to review” (*epanakamptikoi*), or, to use another term, “reversible” (*antistreptikoi*).

In practice it was more or less impossible to enforce a complete ban on the acquisition of real rights on ecclesiastical property. This can be seen in the manner in which the question of the charging of ecclesiastical property with the real rights called *servitude* was treated. In legal terminology, a *servitude* is a real right that can be acquired over a piece of property and that grants some benefit either to any owner of some other property (a *predial servitude*) or to a certain specified person (a *limited personal servitude*). Among common examples of servitudes were the right to cross land belonging to another person, the right to draw water from a well on land belonging to another person, the right to use the drainage system of the other property, and so on. It would seem from the decisions of ecclesiastical courts in the late Byzantine period that such rights could be acquired on ecclesiastical property when some consideration, such as a duty, was paid.¹⁹ The example that follows demonstrates that this was a practical solution that must have been arrived at by those who implemented the law. Let us suppose that on an ecclesiastical estate, of which there were very many in the Byzantine countryside, there was a well that was the only source of water for the adjoining properties. In such a case, compliance with the rules prohibiting the charging of ecclesiastical property with real rights would have been disastrous for the neighboring farmers, since in order to draw water from the well by right, at regular intervals and without impediment, a servitude to draw water would have to be established in favor of their properties and this could have constituted the charging of the ecclesiastical property with a real right in favor of a third party. Introduction of the payment of a duty—which was not a common practice in the more general exercise of servitudes, but as far as I am aware is encountered only when the property in question was ecclesiastical—enabled the church to demonstrate that it was not ceding its rights without benefit and made it possible for the agrarian economy to function normally.

As we have already seen, the foundation of the church’s assets was made up of the contributions of the faithful, and, when the emperors, too, joined the ranks of the faithful these donations increased in significance and extent. Apart from granting assets to preexisting ecclesiastical foundations, emperors, nobles, and even those of a middling financial competence began to found churches (and later monasteries), which they endowed with the appropriate assets. The legal framework that governed these relationships was called *ktetorikon dikaion* or *ktetoreia*.²⁰ The *ktetor* (“founder”) had ad-

¹⁸ On this question, see Konidaris, Δίκαιον, 194, 200–201, and Papagianni, Νομολογία, 94, 215–16.

¹⁹ See Papagianni, Νομολογία, 266.

²⁰ See the old but classic study by J. von Zhishman, *Das Stifterrecht* (τὸ κτητορικὸν δίκαιον) *in der morgenländischen Kirche* (Vienna, 1888). Konidaris provides a more up-to-date analysis in Τυπικά, 35–43, with additional bibliography, and after him Thomas, *Foundations*, 253–62.

ministrative rights over the assets of the monastery or church, but was not entitled to appropriate them. On the other hand, the new ecclesiastical foundation remained perpetually under the control of the bishop, while the *ktetor* selected the personnel and was commemorated in church services. Although *ktetoreia* could be inherited and transferred, it was not—in theoretical terms, at any rate—to be conceived as ownership of the church or monastery. However, it has to be noted that the sources of the late Byzantine period suggest that the rights of *ktetores* of churches and other ecclesiastical foundations had lost much of their spiritual character by this time and were strongly reminiscent of the right of ownership.²¹

In general, the foundation of a church or monastery was seen as a work pleasing to God and deserving of praise; on the other hand, it was expressly and absolutely forbidden for ecclesiastical foundations, and monasteries in particular, to be transferred to laymen and converted into “secular abodes.”²² Those familiar with the reality of Byzantium realize the extent to which the practice of the *charistikion*²³ of monasteries, with all their property, in particular to laymen (*charistikarioi*), had spread, through the donations widely practiced by emperors, patriarchs, and bishops, especially in the period from the tenth to the twelfth century. It is clear that the prohibition, reiterated frequently not only in the canons but also in laws and legal textbooks,²⁴ did not apply in practice. Here, then, we are obviously dealing with a discrepancy between law and reality over a matter of prime importance for the Byzantine economy, that is, the question of the economic operation of the monasteries. To put things in their proper perspective, it has to be said that the institution of the *charistikion* was theoretically intended to support monasteries that had in many respects gone into decline and that some person of consequence had undertaken to assist.²⁵ Nor, indeed, was this a real donation in the narrow sense of the term, but rather a grant for a specific period of

²¹ On this matter, see E. Herman, “‘Chiese private’ e diritto di fondazione negli ultimi secoli dell’impero bizantino,” *OCP* 12 (1946): 302–21; Thomas, *Foundations*, 255–56; Papagianni, Νομολογία, 261–63.

²² Κοσμικὰ καταγωγή; see canon 24, fourth ecumenical council; canon 49, Penthekte; canon 13, seventh ecumenical council; canon 1, first/second council.

²³ See E. Herman, “Ricerche sulle istituzioni monastiche bizantine: Typika ktetorika, caristicari e monasteri ‘liberi,’” *OCP* 6 (1940): 293–375; Charanis, “Properties,” 73–81; J. Darrouzès, “Dossier sur le charisticariat,” in *Polychronion: Festschrift Franz Dölger zum 75. Geburtstag*, ed. P. Wirth (Heidelberg, 1966), 150–65; H. Ahrweiler, “Charisticariat et autres formes d’attribution de fondations pieuses aux Xe–XIe siècles,” *ZRVI* 10 (1967): 1–27 (= eadem, *Etudes sur les structures administratives et sociales de Byzance* [London, 1971], art. 7); P. Lemerle, “Un aspect du rôle des monastères à Byzance: Les monastères donnés à des laïcs, les charisticaires,” *CRAI* (1967) (= idem, *Le monde de Byzance: Histoire et institutions* [London 1978], art. 15); Konidaris, Δίκαιον, 258–63; Thomas, *Foundations*, 157–213. The term *charistike dorea* is not found in the sources, but *charistike* and *dorea* are used alternately. However, experts in this field have concluded that *charistike dorea* must have been the full name of the institution. See Varnalidis, Χαριστική (δωρεά), 36–37, with references to earlier bibliography.

²⁴ See Novel 120.7.1; *Eisagoge* 10.11 (Zepos, *Jus* 2); *Bas.* 5.2.9; *Epitome Legum* 8.5 (Zepos, *Jus*, vol. 4); *Eisagoge aucta* 8.13, 21.15; *Ecloga ad Prochiron mutata* 23.2 (Zepos, *Jus*, vol. 6); *Synopsis Minor* M 80 (Zepos, *Jus*, vol. 6).

²⁵ See Varnalidis, Χαριστική (δωρεά), 44, and Thomas, *Foundations*, 157.

time.²⁶ However, it soon became apparent that the *charistikarioi* often administered the monasteries in an abusive manner that damaged the interests of the church. After the end of the tenth century, various patriarchs and Emperor Alexios Komnenos I attempted to place restrictions on the more blatant cases, though without ever expressly abolishing the institution. After the twelfth century, it would seem that grants of *charistikion* to laymen dwindled or ceased altogether, probably being replaced by the institution of *ephoreia*, which sometimes involved usufruct on the monastery's assets or the collection of a part of its revenues by the *ephoros*.²⁷

If it is true to say that over the matter of the administration of ecclesiastical property there was some discrepancy between the rules the church itself had often instituted and the way in which they were implemented, then the imperial policy toward ecclesiastical property could be described as having two completely different faces. As a rule, the emperors were the church's greatest benefactors. Yet when they had to confront the fact that, little by little, the church had evolved into one of the greatest landowners in the state, they began, during and after the middle Byzantine period, to take measures to restrict its economic power.²⁸ Indeed, there is no shortage of cases in which the same emperor acted both as a benefactor of the church and as its opponent, always in the economic sphere. As we shall see, there was little consistency or continuity in the measures taken. The contradictions were so numerous and sharp that imperial policy where monastic property was concerned has aptly been described as "an absence of policy."²⁹

The first systematic and extensive measures to the detriment of ecclesiastical property were taken by the iconoclastic Isaurian dynasty, whose emperors dissolved monasteries and confiscated their property. It is characteristic that even before the upsurge in the persecution of the iconodules in which Constantine V was so ardent, the sanctions on property in favor of the monasteries provided for in Justinianic law³⁰ had been tacitly abolished by the *Ecloga* of Leo III. However, in the particular case of Leo it has to be borne in mind that this attitude was not the result of a more generally hostile attitude toward the church, but of his endeavor to restrict the power of the monasteries and the influence they wielded.³¹ Such efforts did not always have ideological motives; they might equally be manifestations of fiscal policy. Emperor Nikephoros I, for example, confiscated certain ecclesiastical estates purely and simply, it would seem, because his predecessor Irene had been excessively generous in her grants of such land.³²

²⁶ See Varnalidis, *Χαριστική* (δωρεά), 51–58, and Thomas, *Foundations*, 157.

²⁷ See Konidaris, *Τυπικά*, 182–88; Thomas, *Foundations*, 218–20.

²⁸ See also Kaplan, *Hommes et la terre*, 282–86, 294–310.

²⁹ Konidaris, *Δίκαιον*, 142.

³⁰ See Novels 6.6, 117.13, 123.30, 43, and 134.10.11. According to these novels, property belonging to deaconesses or nuns who married or indulged in sexual relations, of adultresses, and of men and women who sought divorce without "lawful" cause was transferred to the monastery in which their confinement was mandatory.

³¹ On the above, see S. Troianos, "Bemerkungen zum Strafrecht der *Ecloga*," *Ἀφιέρωμα στο Νίκο Σβορώνο* (Rethymnon, 1986), 1:110.

³² See G. Ostrogorsky, *Geschichte des byzantinischen Staates*, 3d ed. (Munich, 1963); Lemerle, *History*, 56. Cf. N. Oikonomides, "The Role of the Byzantine State in the Economy," *EBH* 990.

Just as there can be no doubt as to the “orthodoxy” of Nikephoros I, or of his friendly attitude to monasticism, so his practical interest in the reconstruction of the state economy is also universally known. It is to this interest that we should attribute the fact that the *Eclogadion* (if, of course, we agree that this draft statute was drawn up between 802 and 811, during his reign),³³ despite its tendency to reinstate Justinianic law, did not reiterate the provisions connected with the sanctions in favor of the monasteries.³⁴

Various measures that had an adverse impact on any further increase in ecclesiastical property, and that were also aimed more immediately at restricting it, were taken between the ninth century and 1204 by emperors well known for their prochurch, and often promonastic, sentiments. The first relevant novel of an emperor of the Macedonian dynasty was issued in 934 by Romanos I Lekapenos³⁵ and expressly forbade, on pain of invalidity of the act in law, the acquisition, in any manner, of land belonging to peasants of limited economic power on the part of the *dynatoi*, a category that explicitly included metropolitan bishops, archbishops, bishops, and abbots, that is, the lawful representatives of the ecclesiastical provinces and the monasteries. The economic objectives of Romanos’ novel are revealed by its prohibition of the granting (*apotage*) of his land³⁶ by a peasant intending to enter a monastery, whereas a donation of the money value of the land to that foundation was permitted. The purpose of the law was not, however, only preventive: it also set about rectifying the injustices that had occurred during the famine of 927–928. For that reason it cancelled, retrospectively, the sales of land to the *dynatoi* that peasants had concluded at that time, though also decreeing that the cash received should be refunded.³⁷

The novel of Romanos I, which does not seem to have had notable practical results,³⁸ was directed against the *dynatoi* in a general sense, which, of course, also included the church. Yet it was Nikephoros II Phokas, that most devout of emperors, profoundly dedicated to ascetic ideals, who took the most effective measures against the church.

³³ This view has been expressed by S. Troianos (see below, note 34). F. Gorla held a different opinion, dating the *Eclogadion* between 829 and 870. On this question, see S. Troianos, *Οἱ πηγές τοῦ βυζαντινοῦ δικαίου*, 2d ed. (Athens, 1999), 127–28.

³⁴ See S. Troianos, “Ἡ διαμόρφωση τοῦ ποινικοῦ δικαίου στή μεταβατική περίοδο μεταξύ Ἰσαύρων καί Μακεδόνων,” *Βυζαντικά* 2 (1982): 92.

³⁵ Svoronos, *Novelles*, 72–92 (= Zepos, *Jus*, 1:205–14); F. Dölger, *Regesten der Kaiserurkunden des oströmischen Reiches* (Munich–Berlin, 1924), no. 628. On the novel, see also Charanis, “Properties,” 55; Konidaris, *Δίκαιον*, 133–34; Lemerle, *History*, 94–97.

³⁶ These contributions made by prospective monks to the monastery were only permitted on a voluntary basis. Here, too, the real situation differed from the written rules. See Konidaris, *Δίκαιον*, 87–95.

³⁷ In 947, however, Constantine VII issued another novel (Svoronos, *Novelles*, 93–103 [= Zepos, *Jus*, 1:214–17]; Dölger, *Regesten*, no. 656), which, while in effect reiterating the measures provided for by the earlier law, was more lenient toward “the poorer monasteries” on condition that they had not conducted the purchase consequent to “violence and injustice.” It also provided that apart from the refunding of the price paid, the monasteries were also entitled to compensation for the expenditure they had incurred to improve the land. On this novel, see also Charanis, “Properties,” 55; Konidaris, *Δίκαιον*, 134–35; Lemerle, *History*, 97–98.

³⁸ See also note 37 above. See also the novel of Nikephoros II Phokas of the year 966/967 (Svoronos, *Novelles*, 177–81 [= Zepos, *Jus*, 1:253–25]; Dölger, *Regesten*, no. 712), which moderated the stipulations of the novel of 934.

In 963/4 he issued a novel³⁹ prohibiting donations of land to metropolitan and other bishoprics, to monasteries, and to ecclesiastical charitable institutions. In the specialized literature, the view that Nikephoros II took these measures to restrict the property of the monasteries because their vast estates were lying fallow and thus unproductive has found many advocates.⁴⁰ However, the reasons for his ban may have been more complex. As an ascetic himself, the emperor cannot have looked kindly upon the church in its role as landowner, and as a competent ruler acting on the basis of political and economic criteria he must have realized how counterproductive and harmful to the state it would be for wealth to accumulate in hands that would never pay the tax truly corresponding to its value. It was presumably for similar reasons that Nikephoros banned the founding of new monasteries and charitable institutions, with the exception of places of ascetic retreat (*lavrai* and *kellia*) in desert areas. The presence in such “deserts” of monastic foundations would, of course, encourage the development of the areas in question. Despite the views to the contrary stated in the past, it is now generally accepted that although the novel of 963/4 later fell into disuse, it was never rescinded by a subsequent law.⁴¹

The struggle between the *dynatoi* and the emperors of the Macedonian dynasty continued throughout the tenth century. Basil II issued a lengthy novel in 996⁴² in which he attempted to restore the novel of Romanos I, which, as we have already noted, does not seem to have had any particular impact on Byzantine economic life. The third section of this law dealt with the church and placed a ban on the appropriation by the bishoprics of the little *eukteria* (literally, “houses of prayer”) that peasants were in the habit of building, endowing with their property, and retreating to as monks. They might be joined in these foundations by a few more “rustics” (*choritai*) who wished to lead a life of asceticism and would grant their lands, too, to the foundation. It would seem that after the death of the founder the various agencies of ecclesiastical administrative power tended to convert these foundations into monasteries and bring them under their own control or to grant them, as *charistikia*, to the *dynatoi*. Basil II was not opposed to the exercise of control over spiritual matters on the part of the church (and, indeed, expressly permitted this in his novel), but what he was obviously trying to avoid was the accumulation of yet more assets by the church on the pretext of founding monasteries. The fact that these *eukteria* could only for reasons of expediency be termed monasteries is shown by the fact that, as a rule, their residents were very few in number. For that matter, the emperor exempted from his arrangement such *eukteria*

³⁹ Svoronos, *Novelles*, 151–61 (= Zepos, *Jus*, 1:249–52); Dölger, *Regesten*, no. 699. Cf. Charanis, “Properties,” 55–61; Konidaris, Δίκαιον, 136–37; Lemerle, *History*, 109–10; Thomas, *Foundations*, 151–53.

⁴⁰ On this subject, see Konidaris, Δίκαιον, 136 n. 17; Konidaris finds persuasive arguments that run counter to this view.

⁴¹ See Konidaris, Δίκαιον, 137; Lemerle, *History*, 110–11; Svoronos, *Novelles*, 185–89.

⁴² Svoronos, *Novelles*, 190–217 (= Zepos, *Jus*, 1:262–72); Dölger, *Regesten*, no. 783. On the novel, see also Charanis, “Properties,” 61–64; Konidaris, Δίκαιον, 138–39; Lemerle, *History*, 103–5, 112–14; Thomas, *Foundations*, 160–63.

as had more than eight monks and accepted that these foundations had become proper monasteries.

The method of augmenting ecclesiastical property described by the novel of 996 indicates that the church was a far from easy opponent even for the most powerful emperors. After the death of Basil II, a long period elapsed before a powerful monarch ascended the throne of Constantinople. Despite occasional measures against the church, described below, the eleventh and twelfth centuries were a period of triumph for the “feudal church.”⁴³ However, in the closing decades of the twelfth century, Manuel I Komnenos—another promonastic emperor—issued a series of edicts recognizing the rights of the church and granting it additional privileges, but at the same time he endeavored to restrict any further growth in monastic property.⁴⁴

On this policy of Manuel I, the historian Niketas Choniates wrote: “He so disapproved of the present situation where those who profess to be monks are richer in substance and more careworn than those who are fond of worldly pleasure that he revived the *novella* of that most excellent emperor of heroic prowess and great wisdom, Nikephoros Phokas, which prohibited the monasteries from increasing their properties but which eventually had become a dead letter and lost its authority, by appending his signature in red ink that, like blood, warms again and quickens with life.”⁴⁵ For the overall economic history of Byzantium, it is ultimately of little significance whether this extract refers to the few lines of a chrysobull issued in 1158—generally favorable to the monasteries—in which the acquisition by them of new property was banned,⁴⁶ or to a chrysobull of 1176 whose existence we know only from a reference in the commentary by the canonist Theodore Balsamon on canon 12 of the seventh ecumenical council, and which may have had a particularly detrimental effect on the monasteries.⁴⁷

⁴³ See Lemerle, *History*, 214–21.

⁴⁴ On the ecclesiastical policy of Manuel I, see N. Svoronos, “Les privilèges de l’Eglise à l’époque des Comnènes: Un rescrit inédit de Manuel Ier Comnène,” *TM* 1 (1965): 325–91 (= idem, *Etudes sur l’organisation intérieure de la société et l’économie de l’Empire byzantin* [London, 1973], art. 7); Thomas, *Foundations*, 224–28; P. Magdalino, *The Empire of Manuel I Komnenos, 1143–1180* (Cambridge, 1993), 276–309.

⁴⁵ *Nicetae Choniatae Historia*, ed. J. L. van Dieten (New York–Berlin, 1975), 207, lines 85–91, H. J. Magoulias, trans., *O City of Byzantium, Annals of Niketas Choniates* (Detroit, 1984), 117–18.

⁴⁶ Zepos, *Jus*, 1:381–85; F. Dölger and P. Wirth, *Regesten der Kaiserurkunden des oströmischen Reiches* (Munich, 1995), no. 1419. See Zepos, *Jus*, 1:384, lines 26–29: “nor will the monasteries be permitted, with regard to what they possess today, whether this be *paroikoi* or lands, or *autourgia*, to expand and increase the population thereof” (οὐδὲ γὰρ ἐπ’ ἀδείας ἔξουσιν αἱ μοναὶ τὰ σήμερον παρ’ αὐτῶν κατεχόμενα, εἴτε παροικοὶ εἶεν εἴτε τόποι εἴτε αὐτούργια, ἐπαύξειν καὶ εἰς πληθυσμὸν ἀγειν πλείονα). On this view, see Charanis, “Properties,” 81–85, 91–92.

⁴⁷ Rhalles and Potles, *Σύνταγμα* 2:603, lines 17–23: “For since, in accordance with the announcements of certain malicious persons, an imperial edict was issued in the month of June of the ninth indiction of the year 6684 almost reversing this most pious and beneficial chrysobull, by it all the monastery property was seized by the *anagrapheis*” (Ἐπεὶ δὲ ἐκ προσαγγελίας χαιρεκάκων τινῶν ἀπελύθη κατὰ τὸν Ἰούνιον μῆνα τῆς θ’ ἰνδικτιῶνος τοῦ ‘ςχπδ’ ἔτους πρόσταγμα βασιλικόν, ἀνατρέπον σχεδὸν τὸ τοιοῦτον εὐσεβέστατον καὶ εὐεργετικώτατον χρυσόβουλλον, καὶ διὰ τοῦτο πάντα τὰ μοναστηριακὰ ἀκίνητα ὑπὸ τῶν ἀναγραφῶν ἡρπάζοντο) (cf. Zepos, *Jus*, 1:425; Dölger and Wirth, *Regesten*, no. 1523). For this point of view, see Lemerle, *History*, 217; Svoronos, “Les privilèges,” 372, 381–82.

What is incontrovertible, however, is that Manuel I must have been the last Byzantine emperor⁴⁸ who attempted to deal with the problem of ecclesiastical property—and of monastic property in particular—in its entirety and, without going to extremes, to prevent its excessive expansion in the future.⁴⁹

Apart from the measures, of varying degrees of strictness, taken against the church by emperors pursuing specific fiscal programs, there were also cases in which the state even went as far—for reasons of *force majeure*—as the confiscation of ecclesiastical property. The earliest known instance of this is connected with the ascent to the throne of Isaac I Komnenos in 1057. Isaac, who had been a military leader before becoming emperor, saw the need for reorganization of the military and, since he had no other sources of funds, confiscated church lands in order to carry it out. In this respect, of course, it is quite possible that he was modeling himself on the glorious military leaders of earlier times (notably Nikephoros Phokas) and that he had more general reforms in view, but in his era such action was difficult to take. In connection with the policy of Isaac, the view has been expressed in the literature that it contributed to the widespread dissemination of grants by *charistikion*, since the ecclesiastical authorities preferred to place their monasteries under the protection of powerful laymen so as to safeguard them against confiscation.⁵⁰ However this may be, Isaac abdicated and withdrew to a monastery only two years after his ascent to the throne.⁵¹

When Alexios I became emperor in 1081, he was faced not only with formidable external enemies such as the Normans, but also with the bankruptcy of the state. Among the measures to which he resorted was the sale of the holy vessels from the churches.⁵² This act, repeated more than once in the history of Byzantium,⁵³ provoked a strong reaction on the part of the church. The emperor thus issued a *chrysobull* denouncing his own act, undertaking the responsibility of making good to the churches what had been taken as soon as this was possible, and forbidding any repetition of such measures.⁵⁴ Nonetheless, in 1087 the emperor sold off more vessels in order to meet the needs of his campaign against the Pechenegs,⁵⁵ and it was not until 1095 that the conflict between the state and the church over the ecclesiastical treasures was resolved.⁵⁶

Regardless of whether or not the confiscation of these vessels, and of some monastic lands,⁵⁷ by Alexios I Komnenos actually contributed to improving the state's finances, the “century of the Komnenoi” was the last period of prosperity in Byzantium; until

⁴⁸ His son, Alexios II, did away with all restrictions; see Lemerle, *History*, 218.

⁴⁹ Cf. Konidaris, Δίκαιον, 141 n. 42.

⁵⁰ Ahrweiler, “Charisticariat,” 20–21.

⁵¹ For the historical events, see Ostrogorsky, *Geschichte*, 269–71; for details of the policy of confiscation, see Charanis, “Properties,” 67–68; Konidaris, Δίκαιον, 139–40.

⁵² See A. Glavinas, Ἡ ἐπὶ Ἀλεξίου Κομνηνοῦ (1081–1118) περὶ ἱερῶν σκευῶν, κειμηλίων καὶ ἀγίων εἰκόνων ἔρις (Thessalonike, 1972) (hereafter Ἐρις).

⁵³ See Glavinas, Ἐρις, 55–56.

⁵⁴ See Zepos, *Jus*, 1:302–4; Dölger and Wirth, *Regesten*, no. 1085, and Glavinas, Ἐρις, 73–80.

⁵⁵ See Glavinas, Ἐρις, 135–38.

⁵⁶ See *ibid.*, 179–93.

⁵⁷ Charanis, “Properties,” 70.

1204, it was not again necessary to turn to the church in search of funds. As for the Greek states of the period of Frankish rule, we have information about the adverse treatment of the metropolitan bishopric of Naupaktos by the civil authorities of the despotate of Epiros.⁵⁸ The period after the recapture of Constantinople was one of gradual decline, leading to a revival of the measures taken in the eleventh century. Of course, no more holy vessels were confiscated during the thirteenth and fourteenth centuries, but Emperors Andronikos II, John V, and Manuel II of the Palaiologan dynasty resorted to policies of confiscation of monastic lands in order to meet military needs.⁵⁹ Yet their measures, applied, as ever, on a limited scale, were not effective, and “the monasteries with their huge properties survived the state.”⁶⁰

⁵⁸ See K. Lampropoulos, *Ἰωάννης Ἀπόκαυκος: Συμβολή στήν ἔρευνα τοῦ βίου καί τοῦ συγγραφικοῦ ἔργου του* (Athens, 1988), 69–75.

⁵⁹ Charanis, “Properties,” 111, 114–17.

⁶⁰ Charanis, “Properties,” 118.

Protimesis (Preemption) in Byzantium

Eleutheria Papagianni

The right of certain categories of persons to *protimesis* (preemption) in cases of the sale of property has attracted the attention of researchers into the Byzantine economy and Byzantine law from a very early date, although no final conclusions as to its nature and the rules that governed it have yet been formulated.¹ This chapter, of limited extent and introductory nature, does not provide solutions to many of the unanswered questions, but examines many instances of *protimesis* primarily in light of the middle Byzantine laws that concerned the way it operated within the legal framework of the day. The institution of *protimesis* long predates the seventh century, the period from which this economic history of Byzantium sets out. The roots of the institution seem

This chapter was translated by John Solman.

¹ On *protimesis*, see F. Schupfer, “Romano Lecapeno e Federico II a proposito della προτίμησις,” *Atti della Reale Accademia dei Lincei* 287 (1890) (Rome, 1891): 249–79; K. E. Zachariae von Lingenthal, *Geschichte des griechisch-römischen Rechts*, 3d ed. (Berlin, 1892; repr. Aalen, 1955), 236–48; G. Platon, *Observations sur le droit de προτίμησις en droit byzantin* (Paris, 1906); G. Ostrogorsky, “Die ländliche Steuergemeinde des byzantinischen Reiches im X. Jahrhundert,” *Vierteljahresschrift für Sozial- und Wirtschaftsgeschichte* 20 (1927): 32–35; P. Zepos, “Τινά περί τῆς βυζαντινῆς προτιμήσεως κατὰ τό δίκαιον τῶν παραδουναβείων χωρῶν,” *Μνημόσυνα Παππούλια* (Athens, 1934), 291–301; G. Ostrogorsky, “The Peasant’s Pre-Emption Right: An Abortive Reform of the Macedonian Emperors,” *JRS* 37 (1947): 118–26; M. Bellomo, “Il diritto di prelazione nel basso impero,” *Annali di storia del diritto* 2 (1958): 187–228; N. P. Matses, “Ζητήματα ἐκ τοῦ θεσμοῦ τῆς προτιμήσεως ἐν τῷ βυζαντινῷ δικαίῳ,” *ΕΕΒΣ* 36 (1968): 45–54; P. Lemerle, *The Agrarian History of Byzantium from the Origins to the Twelfth Century* (Galway, 1979), 87–108; J. Vin, “Pravo predpochtienia v pozdnevizantiiskoi derevne,” *VizVrem* 45 (1984): 218–29; J. Vélissaropoulos-Karakostas, “ΣΥΝΕΠΑΙΝΟΥΝΤΕΣ: Aux origines du droit de préemption,” *Symposion 1988: Vorträge zur griechischen und hellenistischen Rechtsgechichte (Siena–Pisa, 6.–8. Juni 1988)*, ed. G. Nenci and G. Thür (Cologne, 1990), 413–24; E. Papagianni, “Ο ὅρος Ἀνακοίνωσις στό ἐμπράγατο δίκαιο τῆς Βυζαντινῆς περιόδου,” *Βυζαντιακά* 10 (1990): 213–26; eadem, “Vorkaufrecht und Verwandtschaft,” *Eherecht und Familiengut in Antike und Mittelalter*, ed. D. Simon (Munich, 1992), 148–60; eadem, Ἡ νομολογία τῶν ἐκκλησιαστικῶν δικαστηρίων τῆς βυζαντινῆς καί μεταβυζαντινῆς περιόδου σέ θέματα περιουσιακοῦ δικαίου (Athens, 1992), 1:221–56; M. Kaplan, *Les hommes et la terre à Byzance du VI^e au XI^e siècle: Propriété et exploitation du sol* (Paris, 1992), 413–29, 434–36; N. Svoronos, *Les Nouvelles des empereurs macédoniens concernant la terre et les stratiotes*, ed. P. Gounaridis (Athens, 1994), 13–40 (cf. the adverse criticism of this edition by L. Burgmann, “Editio per testamentum,” *Rechtshistorisches Journal* 13 [1994]: 455–79); H. Saradi, “The Neighbors’ Pre-Emption Right: Notes on the Byzantine Documents of Transactions,” *Δίπτυχα* 6 (1995–96) [= *Μνήμη Bruno Lavagnini*]: 267–89; see also the publications referred to in the notes below. See now A. Kabas, *Περί Προτιμήσεως* (Athens, 2000).

to stretch back to the Hellenistic era, and it is dealt with in early Byzantine laws.² It is not impossible, then, that *protimesis* had always influenced property transactions and that, for reasons not yet fully clarified, it took on a fresh significance during and after the tenth century, when it could be said to have been reintroduced into the law of the day.³

Law is of interest here primarily to the extent to which it had an impact on the economic history of Byzantium, and not in any narrowly dogmatic sense. Thus I do not discuss the extent to which *protimesis* was a distinctive form of real right⁴ or a restriction on the right of ownership,⁵ but the manner in which it affected the law of land-ownership, especially in rural areas. G. Platon's approach,⁶ which sought an explanation of the existence of the right in the tendency for property to "become intermingled" (*anamige*), is extremely interesting in legal terms and also of great use for a study of this issue. However, an economic history of Byzantium is more concerned with the practical objectives of the legislator than with the theoretical background those objectives may have had, so I will not deal with this theory in detail here.

Before discussing individual texts and their functions, we need to look at the concept behind the term *anakoinosis*, often found in the Byzantine sources in conjunction with *protimesis*. In some cases, the sources refer to *anakoinosis choriou*, which seems to allude to the view of a community as a fiscal as well as a geographical entity⁷ and was certainly bound up with the right of *protimesis*; in other cases, the sources use the term *anakoinosis* without necessarily linking it to communal lands. As I hope I have succeeded in demonstrating elsewhere, in the latter instance the *anakoinosis* might denote a true state of affinity between a person and a property from which a right of *protimesis* might arise. There is special interest in the manner in which the term is used when a number of prospective new owners of the property presented themselves, each of them grounding his right of *protimesis* on a different causal factor. As we shall see, these grounds were not all equally strong. In such cases, only the strongest ground created a relation of *anakoinosis* to the property in the final assessment and thus implied a right of *protimesis*. Finally, it should be noted that the term could refer not only to the relationship between persons and property but also to relations between pieces of property that went beyond mere neighborhood (*geitonia*), as in the case of the surrounding of one piece of land by another, or of a number of structures standing on common ground.⁸

The earliest law of the middle Byzantine period reintroducing *protimesis*⁹ into the

² See Vélissaropoulos-Karakostas, "ΣΥΝΕΠΑΙΝΟΥΝΤΕΣ," and Papagianni, "Vorkaufsrecht," 149–50.

³ Cf. Svoronos, *Novelles*, 14–28, and Burgmann, "Editio," 469–70.

⁴ See Zepos, "Προτίμησης," 293, and G. Petropoulos, *Ἱστορία καὶ Εἰσηγήσεις τοῦ Ρωμαϊκοῦ Δικαίου*, 2d ed. (Athens, 1963), 957–58.

⁵ See M. Kaser, *Das römische Privatrecht*, 2d ed. (Munich, 1975), 2:269, and D. Gofas [G. Kophas], *Ἱστορία καὶ Εἰσηγήσεις τοῦ Ρωμαϊκοῦ Δικαίου* (Athens, 1989), 3:172.

⁶ Platon, *Observations*, 18, 20.

⁷ For the communities, see Kaplan, *Hommes et la terre*, 186–203.

⁸ For more detail, see Papagianni, "Ἀνακοίνωση."

⁹ I do not agree with Svoronos' (*Novelles*, 28–46) view that Leo VI developed "reformist" activities in this respect, principally because I follow the belief of A. Schminck ("Novellae extravagantes" Leons

Byzantine legal system is a novel of Emperor Romanos I Lekapenos¹⁰ issued in 922 or, according to N. Svoronos, 928.¹¹ Under this law, when property was sold or otherwise alienated for a consideration, preference had to be given to the following persons, in order: (1) co-owners, even after the distribution of the jointly held property, and in the following order: (a) joint owners who were also kin; (b) joint owners by virtue of a previous relationship of association, such as joint purchase; (c) ordinary joint owners, as created, for example, by the independent purchase of notional shares in a property; (2) those who possessed property sharing the same fiscal obligation or paying levies to the same landlord (making them *homoteleis*); (3) neighbors. These categories are adduced not from a verbatim reading of the novel, but from its interpretation,¹² greatly aided by an anonymous commentary in codex Paris gr. 1355.¹³

This commentary raises a problem in connection with the first group in order of priority (co-owners who were also kin). The expression οἱ ἀναμιῖξ συγκαίμενοι συγγενεῖς by which the novel referred to these persons indicates that they were not blood relatives in general but only those with a right of co-ownership on the property whose ownership was to be transferred. It would seem, then—perhaps as a result of the previous history of the institution—that it was not self-evident to the Byzantines that a blood relationship was not in itself sufficient to create a right of *protimesis*: a connection with the property to be alienated was also necessary.¹⁴ Indeed, as can be seen from sources detailing practice rather than law and dating from times later than the novel, kinship was a factor taken into much wider consideration during implementation of the rules of the law of preemption than the novel of Romanos and the anonymous commentary would allow us to suppose.¹⁵ It is not impossible that those who enforced the law, perhaps conforming to popular belief, sometimes applied the right of preemption to categories of persons outside those specified above, including, for example, the occupants of the property, although it is not possible to adduce any such right from the text of the novel, even indirectly.¹⁶

Furthermore, the novel of Romanos I established the framework that ought to gov-

VI,” *Subseciva Groningana IV. Novella Constitutio: Studies in Honour of Nicolas van der Wal* [Groningen, 1990], 195–201) to the effect that the so-called Novel 114 of this emperor is a forgery. On this question, see also Burgmann, “Editio,” 470, 478–79. Kaplan (*Hommes et la terre*, 410–14) also attributes “reformist” legislative activity to Leo VI.

¹⁰ Svoronos, *Novelles*, 47–71; F. Dölger, *Regesten der Kaiserurkunden des oströmischen Reiches* (Munich–Berlin, 1924), no. 595.

¹¹ See Svoronos, *Novelles*, 33, 59. As for Svoronos’ dating, Lemerle (*History*, 87) has his reservations, Kaplan (*Hommes et la terre*, 415–16) adopts it, and Burgmann (“Editio,” 470) is absolutely opposed to it.

¹² See Schupfer, “Romano Lecapeno,” 252–54; Zachariae von Lingenthal, *Geschichte*, 239–44; Ostrogorsky, “Steuergemeinde,” 33–34; Lemerle, *History*, 91–94.

¹³ See Zepos, *Jus*, 1:198–200, and the new edition, with commentary, by A. E. Laiou, *Mariage, amour et parenté à Byzance aux XIe–XIIIe siècles* (Paris, 1992), 148–54, 178–81.

¹⁴ The role of kinship in *protimesis* is overemphasized by N. Pantazopoulos, *Ρωμαϊκόν δίκαιον ἐν διαλεκτικῇ συναρτήσει πρὸς τὸ ἐλληνικόν* (Thessalonike, 1979), 2:150.

¹⁵ See Papagianni, “Vorkaufsrecht,” and eadem, *Νομολογία*, 224–30.

¹⁶ See Papagianni, *Νομολογία*, 234–40.

ern the right of *protimesis* in terms of the type of contract to which it could be applied and the procedure that had to be complied with when the persons with priority were exercising their rights. The right of preemption could only arise—and, correspondingly, there was an obligation that the persons with priority be informed of their right—in cases of the sale, *emphyteusis*, or leasing of property; it was expressly precluded in the conclusion of donations of all kinds, exchanges, arrangements, the formation of dowries, and the contents of wills. The invitation to declare interest was to be issued by the person owning the property. The persons with priority were all to be invited to declare an interest, which they were required to do within thirty days or, in special cases, four months. A positive declaration of interest on the part of a person with a strong right excluded all those whose rights were weaker, while failure to take action led to the transfer of the right of *protimesis* to the next person in order of priority. If, however, more than one person with equal rights made a timely declaration of interest in acquiring the property, then it was transferred jointly to all of them. The price (and thus, *pro rata*, the rent) ought to be commensurate with the value of the property or with what any third party (without a right of preemption) was prepared to pay, provided that this prospective purchaser was not acting by willful conduct (*dolus*). Exercise of the right of *protimesis* within the set time limits cancelled any previous transfer of ownership. However, in this instance the person possessing the right had to pay the *bona fide* purchaser the price of the property, plus lawful interest and the sum of any expenditure on the property that he might have incurred. In the event of collusion between the vendor and the first purchaser or of a fraudulent donation or some other contract of a similar kind, both the property and the price paid for it were confiscated by the fisc, which was then bound to transfer the ownership of the property in accordance with the rules of the law of preemption.

Needless to say, these rules established by the novel were not strictly complied with, and it would appear that the law was applied with significant variations as to procedural matters such as the obligation to notify the persons with priority and the time limits for exercising the rights, and there would also appear to have been considerable toleration of purchasers who were not in good faith.¹⁷ Indeed, as we shall see, instances of violation of these principles must have been quite frequent; even so, *protimesis* had a powerful impact on the law of property throughout the rest of the Byzantine period and survived into post-Byzantine times, not being abolished in modern Greece until 1856, by the law “concerning the registration of deeds.”

The novel of Romanos I seems to have had two purposes: first, to establish the rules described above for exercise of the right of preemption as an institution of the law of property “in every city and country;” second, of a more fiscal nature, to protect rural communities from the tendency of the *dynatoi* (“the powerful”) to encroach on them. Indeed, the emperor expressly declared that he had issued the law not only out of an interest in the well-being of his subjects, but also so as to benefit the state finances.

¹⁷ See Matses, “Ζητήματα”; Ostrogorsky, “Pre-Emption”; M. T. Fögen, “Zeugnisse byzantinischer Rechtspraxis im 14. Jahrhundert,” *FM* 5 (1982): 232–36; Papagianni, Νομολογία, 241–54.

Scholars as early as K. E. Zachariae von Lingenthal¹⁸ took this declaration by Romanos as evidence linking the issuing of the novel on *protimesis* with the tax system of imposition of the *epibole* and the *allelengyon*, involving the compulsory taxation of the inhabitants of a *chorion* even for community land that had been abandoned or on which a shortage of funds made it impossible to pay taxes.¹⁹ G. Ostrogorsky²⁰ completely embraced this view, seeing *protimesis*—regardless of any other reasons that may have led to its reintroduction—as more or less a concomitant of taxation under the method described above. On this point, however, I incline more toward the view of Platon,²¹ who argued that while the “intermingling” (*anamige*) of property certainly lay behind any relationship of *protimesis*, tax law, rather than the law of property, was relevant to the manner in which it was to be applied in the communities.

In other words, it would seem that in the communities the right of preemption took a form favorable to the members of the village, who were collectively responsible for taxes, and detrimental to the *dynatoi*, who paid their taxes on an individual basis. This unfavorable approach should probably be seen as a preventive measure designed to obstruct the absorption of community land by the great landowners, a development that might have led to the disappearance of uniform taxation. It is also possible that the slackening in the fiscal nature of the institution of preemption in the late Byzantine period and the increasingly frequent use of the term *plesiasmos* (“proximity”) to describe the relations that established it²² were the result of a change in the economic structures of the empire that affected, among other things, the system of taxation.

In connection with the exercise of the right of *protimesis* in the village community, the novel of Romanos states: “In the case of groups of so-called *choria* and *agridia*, let it be *a fortiori* that the inhabitants thereof hold a right of *protimesis* toward one another.”²³ Here I think we are dealing with the *anakoinosis choriou*, involving the compulsory exercise of a right of preemption among the members of the community, although I do not believe this would have meant that the general provisions of law would not have been taken into account when the strength of the right of these persons was being assessed. The emperor’s desire to maintain the closed nature of the village communities—presumably for political as well as economic reasons—is also apparent in the provisions of the same novel concerning the *dynatoi*. They were prohibited from acquiring by purchase, lease, or exchange property within village communities where they did not already own estates. Here it should be noted, however, that the novel’s provisions with regard to the *dynatoi* are not uniform in the two variant texts, published in parallel in the most recent edition.²⁴ The text of the second version, which N. Svoronos

¹⁸ Zachariae von Lingenthal, *Geschichte*, 236–38.

¹⁹ See Kaplan, *Hommes et la terre*, 207–315, 439–43. For taxation, cf. N. Oikonomides, “The Role of the Byzantine State in the Economy,” *EHB* 995ff.

²⁰ Ostrogorsky, “Steuergemeinde,” 35.

²¹ Platon, *Observations*, 126–36.

²² See Papagianni, *Νομολογία*, 234–35.

²³ Ἀλλὰ καὶ ἐπὶ τῆς ομάδος τῶν καλουμένων χωρίων καὶ ἀγριδίων πολλῶ μάλλον κρατεῖται, ἵνα καὶ οἱ οἰκήτορες αὐτῶν πρὸς ἀλλήλους ἔχουσιν τὴν προτίμησιν: Svoronos, *Novelles*, 66, lines 53–55.

²⁴ See *ibid.*, 47–50.

regards as not genuine,²⁵ has an interpolation at this point imposing a general ban on the *dynatoi* from purchasing land in the village communities, whether the land belonged to private individuals or was public. Such land could henceforth be transferred only to the ownership of members of the community, and the *dynatoi* might acquire it only if the members of the community repudiated, freely and not under duress, their right to purchase it.²⁶

The adverse treatment of the *dynatoi*—a category that, according to the text of this novel, also included persons who drew such power as they possessed from third parties²⁷—may also be observed in the fact that the law forbade them to acquire the property of poorer persons by donation or testamentary disposition, unless they were kin of the donor or testator, or even by mere concession of use (presumably without a consideration). The novel makes special mention of the relationship of *patroneia*, defined by the terms “protection and assistance.” Here the reference is not to purchase, or to acquisition by other forms of bilateral act or donation, but to the concession of the land by reason of the special personal relations created by *patroneia* between the *dynatoi* and the *penetes*.²⁸ If the *dynatos* infringed these provisions, he would not only lose the land, but would also forfeit to the fisc any price he may have paid for the land.

At the end of the paragraph referring to the *dynatoi*, the second version of the novel (that regarded as inauthentic) continues as follows: “After ten years have elapsed without any objection being raised, no claim can be raised by any of the persons granted preemption by the present or by the state against persons engaging in transactions of any kind or acquiring any thing by donation or inheritance.”²⁹ Two interpretations of this passage have been proposed. According to the first, it means that if the lawful notification had not been made, the right of *protimesis* could be exercised for up to ten years after the transfer of ownership of the property, on the model of the provisions concerning usucaption.³⁰ According to the second, the passage does not refer to *protimesis* in general, but to the acquisition of land, in whatever manner, by *dynatoi*, as is indeed the subject of the paragraph in question.³¹ This is not the place for a critique of one or the other interpretation.³² The passage is mentioned here solely because, on

²⁵ Ibid., 55–58.

²⁶ This passage forms part of the uniform text of the Zachariae von Lingenthal edition (see Zepos, *Jus*, 1:203). For the working methods of Svoronos, who adopts the distinction between the texts, see the critique of Burgmann, “Editio,” 465–66.

²⁷ Svoronos, *Novelles*, 70, lines 83–86. Ἐκεῖνοι δὲ νοεῖσθωσαν δυνατοὶ οἵτινες, κἂν μὴ δι’ ἑαυτῶν, ἀλλ’ οὖν διὰ τῆς ἐτέρων δυναστείας πρὸς οὓς πεπαρρησιασμένως ᾤκείωνται, ἱκανοὶ εἰσιν ἐκφοβῆσαι τοὺς ἐκποιοῦντας ἢ πρὸς εὐεργεσίας ὑπόσχεσιν τὴν πληροφορίαν αὐτοῖς παρασχεῖν.

²⁸ See Platon, *Observations*, 136–55, and Kaplan, *Hommes et la terre*, 169–71.

²⁹ Μετὰ μέντοι δεκαετίαν ἀνεπιφώνητον κατὰ τῶν ὅπως οὖν συναλλαζάντων ἢ δωρεᾶς δεξαμένων ἢ ἐκ διαθήκης τι κτησαμένων οὐδεμία παρ’ οὐδενὸς τῶν ἐντεῦθεν προτιμωμένων, ἢ καὶ ὡς ἐκ τοῦ δημοσίου ζήτησις ἔσται: Svoronos, *Novelles*, 71, lines 93–96. This passage, too, is in the Zachariae von Lingenthal edition (see Zepos, *Jus*, 1:204).

³⁰ See N. Matses, Νομικά ζητήματα ἐκ τῶν ἔργων τοῦ Δημητρίου Χωματιανοῦ (Athens, 1961), 54.

³¹ See Zachariae von Lingenthal, *Geschichte*, 246–47.

³² However, for some examples of practices that incline toward the first interpretation, see Papagianni, Νομολογία, 247–50.

the one hand, it could be taken as a further special arrangement for the *dynatoi* (one that might even be in their favor) and, on the other, because it is indicative of the gaps left by the novel of Romanos I—at least in the forms in which we are familiar with it today—for the system by which the institution of *protimesis* functioned during the tenth century.

Two later novels issued by the Macedonian emperors and dealing with “*dynatoi* who encroach on the *anakoinoseis* of the poor” are connected with the law of *protimesis*, or at least with that branch of it that deals with the relations between the powerful and the weak. These are the novels of Romanos I, dating from 934 and prohibiting the acquisition of land in village communities on the part of *dynatoi*, and of Constantine VII, dating from 947, which supplements and makes minor amendments to the novel of Romanos.³³ In these laws, one can clearly discern the desire of the emperors to protect the *anakoinoseis* of the village communities against the depredations of the *dynatoi*. As P. Lemerle has observed,³⁴ the reiteration thirteen years later of the provisions of the novel of 934 is an indication that the general undertaking was not just a consequence of the famine of 927/928, which had reduced the villagers to economic misery, but a major campaign to limit the expansion of the great landowners. Even if we resist being misled by the rather romantic notion that some, at least, of the Macedonian emperors possessed the political will to engage in such an endeavor, and confine ourselves to seeking its origins in the more pedestrian requirements of the public finances as identified by the “technocrats” of the age,³⁵ there can be no doubt that the most important pieces of legislation of the period after Leo VI were designed to do everything possible to protect the small landholdings of rural areas.

The term *protimesis* is also used in a novel issued by Nikephoros II Phokas in 966/967, a passage from which has attracted considerable scholarly attention. The text of the law is as follows: “Since the emperors who ruled before us, in response to the scarcity that occurred in those times, created legislation that rightly prohibited the acquisition of the goods of the poor by the *dynatoi*, and added to this legislation that the poor had the right of *protimesis* on the lands of the *dynatoi*, not only by reason of contiguity but also by reason of the joint payment of tax, and [since] they completely excluded those whose power was increasing day by day, allowing them no loophole of further acquisitions, but, rather, causing even those who earlier had become rich to live in straitened circumstances and in poverty by granting to the poor the right of *protimesis*.”³⁶

³³ Svoronos, *Novelles*, 72–92; Dölger, *Regesten*, no. 628 (See the headings of the novel, as they have survived in the various manuscripts, in Svoronos, *Novelles*, 79–81); Svoronos, *Novelles*, 93–103; Dölger, *Regesten*, no. 656 (see the headings of the novel in Svoronos, *Novelles*, 96–98).

³⁴ Lemerle, *History*, 97.

³⁵ See Burgmann, “Editio,” 456.

³⁶ Ἐπεὶ οὖν οἱ πρὸ ἡμῶν βεβασίλευκότες διὰ τὴν γενομένην κατὰ τὸν τότε καιρὸν ἔνδειαν νομοθεσίαν ἐξέθεντο, κωλύοντες τοὺς δυνατοὺς μὴ τὰ τῶν πενήτων καὶ στρατιωτῶν ἐξανείσθαι καὶ καλῶς ποιοῦντες, προσέθεντο δὲ ἐν αὐτῇ καὶ τὴν προτίμησιν τοὺς πένητας δέχεσθαι εἰς τὰ τῶν δυνατῶν κτήματα, μὴ μόνον ἐξ ἀνακοινώσεως, ἀλλὰ καὶ ἐξ ὁμοτελείας, καὶ πάντα τοὺς καθ’ ἐκάστην αὐξανομένους ἀπέκλεισαν, μὴ

When publishing this novel, Zachariae von Lingenthal believed that it referred to the two laws of Romanos I, that “concerning *protimesis*” and that of 934.³⁷ Lemerle³⁸ tried to settle for one or other of the novels but admitted to experiencing difficulty in doing so, for the following reasons. The novel of 934 was indeed issued, as we know, to rectify the injustices caused by the great famine of 927/928 and so as to prevent great landowners extending their property at the expense of smallholdings, but it makes no explicit mention of *protimesis*, nor, of course, does it contain any such arrangement as described above. As for the novel “concerning *protimesis*,” in which, as we have seen, express mention is made of some priority of the poor over the *dynatoi* when private or public land forming part of the *anakoinosis choriou* was being transferred, Lemerle ran into the stumbling block of its dating to 922, that is, before the famine. Despite his inclination to accept the later dating of the novel proposed by Svoronos, he continued to believe that what it has to say about the priority of the poor over the *dynatoi* is not sufficient to identify it with the law to which the author of the novel of 967 is alluding.

One could note at this point that to date the novel “concerning *protimesis*” to the year 928 solves the first of the two problems. Yet apart from the fact that this dating is not universally accepted, Lemerle’s reservations are also based on matters of substance: that is, on the absence of any reference in the novel “concerning *protimesis*” to the priority of the poor when land belonging to the *dynatoi* was being sold, but only to restrictions on the *dynatoi*. Nonetheless, I believe that the obscure passage in the novel of 967 becomes less troublesome if it is not seen as essential that it should be closely connected with either of the other novels. I think that what Svoronos seems to have believed³⁹ is more likely: in other words, that the author of the law was referring in general to the legislation of his predecessors on the restriction of the power of the *dynatoi* and on soldiers’ land, since some of this legislation was indeed strongly influenced by the consequences of the famine of 927/928. He must also, however, have been referring to a specific arrangement specially concerning the priority of the poor when land belonging to the *dynatoi* was being transferred.

A careful reading of the novels to which we must agree the law of 967 was referring reveals the following passage in a novel of Constantine VII dating from 943: “and in the event of a powerful person selling or otherwise disposing of [land], it was resolved that the villagers with whom the powerful person is in *anakoinosis* are to be preferred, when without the possession of that land or water or mountains theirs cannot be managed.”⁴⁰

δόντες την οίανούν τούτοις παρείδουσιν ἐπικτήσεως, ἀλλὰ μάλλον καὶ τοὺς προγεγονότας εὐπόρους ἐκ τοῦ προτιμᾶσθαι τοὺς πένητας εἰς τὴν ἐξώνησιν στενῶσει καὶ ἀπορία συζῆν πεποιηκότες: Svoronos, *Novelles*, 177–81 (the text of the law is on 180–81); Dölger, *Regesten*, no. 712.

³⁷ See Zepos, *Jus*, 1:253 n. 4.

³⁸ Lemerle, *History*, 101 n. 1.

³⁹ Svoronos, *Novelles*, 178.

⁴⁰ καὶ δυνατοῦ προσώπου πιπράσκοντος, ἢ ἄλλως ἐκποιουμένου συνεωράθη προτιμᾶσθαι τοὺς χωρίτας, ἐν οἷς εἰσι ἀνακεκοινωμένοι, ἢ χωρὶς τῆς ἐκεῖνου νομῆς ἢ τῶν ὑδάτων ἢ τῶν ὀρέων οὐ δύνανται διοικεῖσθαι; in the Svoronos edition (*Novelles*, 102, line 93), the underlined phrase reads ἐν χωρὶς τῆς ἐκεῖνου,

What we see in this passage, I believe, is that the villagers are to be preferred as purchasers of the land belonging to the *dynatos* when their land is linked to it by a relationship of *anakoinosis* or some other relationship of dependency to such an extent that the economic purpose of the villagers' land could only be fulfilled with the help of the land belonging to the *dynatos*. Here I believe that *anakoinosis choriou*, in its fiscal sense (typified by the term *homoteleia*, the joint payment of tax), has to be taken for granted, in principle—since we are dealing with a community—and that the legislator was seeking other factors that would imply *anakoinosis* in its meaning in the law of property. In this instance, that is, *anakoinosis* must be used both in the sense of a right out of which *protimesis* could arise (even if that right was not so strong as that which a prospective *dynatos* purchaser might have) and also in the sense of a particularly close relationship among pieces of property such as that described above. However, apart from the privileged treatment the villagers enjoyed in connection with the purchase of land connected to their own by a relationship that went beyond mere proximity or over which they enjoyed special rights, the law also granted the privilege on land that was simply taxed jointly with their own—regardless of its geographical location in the community—when without that land their own could not be effectively operated.

In view of the above—and on the basis of such texts as have come down to us, which, unfortunately, often contain obscurities, gaps, and instances of overlapping and repetition—I think that we may have identified the specific arrangement of which the novel of 966/967 is quite clearly critical. There can, in fact, be little doubt of the exaggerated nature of the criticism, since—if the view outlined above is accepted—it would not be possible for any chance member of the community to receive preference in buying the land of the *dynatoi*, nor, of course, would the latter have declined into poverty as a result of this practice. The legislator's wish to favor the *dynatoi* can be seen, then, in the abolition in all circumstances of the favorable treatment of the poor in buying land belonging to the *dynatoi*. Furthermore, it is laid down that henceforth only *archontika prosopa* ("lordly persons") could purchase the lands of the *dynatoi*. On the other hand, land belonging to soldiers and other poor persons could not be bought by the *dynatoi*, even when there were reasons that would theoretically assure them of a right of *protimesis*.

The clear purpose of the novel of 966/967 is to maintain the status quo of land-ownership insofar as the social and economic condition of the owners was concerned. It certainly favors the *dynatoi*, in that it abolishes the *protimesis* of the poor over their lands; at the same time, however, by forbidding them to buy the land belonging to smallholders it put a brake on the excessive expansion of the great estates. Apart from

which is incomprehensible and obviously a printer's error. From the critical note, it is clear that Svoronos must have read the phrase εἰ χωρὶς τῆς ἐκείνου, although ἦ is found in four of the manuscripts he used and in the Zachariae von Lingenthal edition (see Zepos, *Jus*, 1:217, line 20). Given that ἦ and εἰ alternate frequently in the codices, and bearing in mind that a final conclusion as to the correct form in such instances can only be reached by conducting an in-depth study of the specific arrangement introduced by the text, I have proceeded to make the change, which I believe essential in order to restore the sequence of the provisions being commented upon.

its more general interest, the novel also provides a useful piece of information about the means that the economically powerful used to acquire the land of the poor, which they purchased at what were presumably extremely low prices: "We order, in the land of a *dynatos* that is sold, that an *archontikon prosopon* shall succeed in the ownership, a [lordly] person, that is, a person who seems likely to relieve and benefit the poor people neighboring upon him, and if such person, after taking possession of the land, harms his neighbors, it becoming apparent that he is a violent and bad person, he shall be expelled not only from the land he has acquired but also from his patrimony."⁴¹ The law can thus be seen attempting to make the *dynatoi* behave like good neighbors of the poor, going so far as to provide for a sanction so strong that, given the social and political conditions of the age, it is doubtful whether it could have been imposed.

The novel does not describe any specific practices, but with the help of this piece of information one can gain a better understanding of the reasons that led the author of the novel of 947 to mention in particular the dependence of the effective operation of the land of the poor on that of the *dynatoi* as a reason for the preference of the former. For example, the novel of 947 refers to land belonging to the poor that cannot be managed without the water of the *dynatoi*. If we imagine a situation in which the only well in the area was located within the boundaries of the land belonging to a *dynatos* who prevented his peasant neighbor from gaining access to it, then we can be more or less sure that the peasant would be unable to cultivate his land, which would eventually cease to produce crops and could be bought up by the *dynatos* for a song. As a result, a cunning or simply recalcitrant man with some social influence and power in the local community would very easily be able to ruin another smallholder and turn him into a dependent peasant.

The last imperial novel to deal with the right of *protimesis* was issued by Manuel I Komnenos and dates from 1166.⁴² Preemption is not the main subject of the novel as a whole, but only of part of it. It would appear, at least at first sight, that the novel deals with preemption only in its purely legal or technical sense, and that it does not go into matters of a more general economic or social interest. Indeed, the effort to place some restraint on the great landowners had died out with the Macedonian dynasty, and the century of the Komnenoi is generally regarded as the era in which those landowners flourished, though smallholdings did not disappear. However, as already noted, *protimesis* survived as an institution in the law of property and had such an influence on practice that new rules for its exercise were created, often through violations of its principles.

The novel of 1166 deals with two ways in which these principles were violated. The

⁴¹ . . . εἰς τὸ διαπωλούμενον κτῆμα τοῦ δυνατοῦ . . . τὴν τούτου πάλιν διαδέχεσθαι δεσποτείαν ἀρχοντικὸν πρόσωπον, τὸ πρὸς ἀνάπαυσιν δηλονότι καὶ ὠφέλειαν τῶν συμπαρακειμένων τούτῳ πενήτων ἀναφαινόμενον, ὅπερ καί, μετὰ τὸ δεσπόσαι τοῦ κτήματος, παραβλάπτει τοὺς γειτονοῦντας κατανοοῦμενον ὡς βίαιον καὶ κακὸν μὴ μόνον ἀπὸ τῆς ἐπικτήσεως, ἀλλὰ καὶ ἀπὸ τῶν γονικῶν ἐκδιώκεσθαι κελεύομεν: Svoronos, *Novelles*, 180, line 31–181, line 37.

⁴² Ruth Macrides, ed., "Justice under Manuel I Komnenos: Four Novels on Court Business and Murder," *FM* 6 (1984): 122–39; Dölger and Wirth, *Regesten*, no. 1465.

first of these was the acquisition of property on the part of a person without a right of preemption by means of the institution of *antichresis*. The term *antichresis* meant an agreement that the yield on a productive thing bearing a real charge such as a mortgage could be collected by the mortgage lender in order to meet his claim for interest on the capital he had advanced. It emerges from the text of the novel that agreements of this kind were concluded in order to cover fictitious loans with real security behind which a sale was concealed, thus circumventing the persons with a right of *protimesis*. Given that, as a rule, all immovable property produced a yield—if not in the sense of a physical crop, then of rent—such agreements corresponded to what we would call concession of usufruct today.⁴³ Since, furthermore, it could always be argued that, although the capital had been repaid, interest was still due and was still being collected, exploitation of the property could continue until the right of preemption had expired.

The second way of violating the rules of preemption to which Manuel I refers probably concerned large properties. It seems to have been the case that when the persons with priority drew that right from a relationship to only one part of the immovable property, owners were in the habit of holding on to that part of the property only and freely transferring the remainder. The emperor prohibited this practice, observing that it constitutes a violation of the novel “concerning *protimesis*” and stating that a privileged relationship of the person with rights of preemption—for example, a neighbor—applied to the entire property and not only to the possibly small section of it from which the right sprang. I would like to note at this point, however, that the question of “small *anakoinoseis*” to large properties was more complex than apparent from the novel of 1166. We know from the *Peira* that persons with such rights frequently exercised them abusively, attempting to buy only the part of the property that interested them and thus endangering the market value of the remainder. The supreme court of Constantinople introduced into the legal system, by case law, the principle that in cases where the *anakoinosis* was disproportionate to the total area of the property, the owner’s wish should be taken into consideration, and that he should be allowed to decide freely whether he wished the whole of the property to be transferred or not.⁴⁴ Of course, one could not contend that Manuel’s novel abolished this practical rule, which was already about a century old, because the arrangement described by the *Peira* refers not to the retention of the “critical” part of the property but to the fate of the remainder. However, there can be no doubt that the concept of *protimesis* applying in all cases to the entire property to be transferred could lead to injustices.

Conflicts of this sort in the implementation of the rules of preemption do not necessarily conceal attempts on the part of the socially or economically stronger to exploit the weak, nor, of course, do they serve as examples of the establishment of a law that benefited the latter, since a small *anakoinosis* did not necessarily mean that the property from which it stemmed was small. Even so, the novel of 1166 introduces yet another arrangement capable of creating the impression that its objectives were in some way

⁴³ See also Macrides, “Justice,” 178.

⁴⁴ See the *Peira*, 50.2, 3 (Zepos, *Jus*, 4:210–21), and Papagianni, “Ἀνακοίνωση,” 219–20.

“social” in nature. More specifically, it lays down in connection with *antichresis* that here, too, the rules of *protimesis* should be applied, and that *antichresis* in the event of the existence of persons with *protimesis* should be treated in the manner that Romanos had provided for donations. As we have already seen, that novel dealt with donations in a way that differed from case to case, depending on whether or not the recipient was a *dynatos* or a poor person. The question that arises at this point, and that was a matter of concern to the most recent editor of the novel,⁴⁵ is whether Manuel’s intention was simply to make sure that property actually was being transferred by virtue of *antichresis*—which, if questioned, could be proved in court by the application, *mutatis mutandis*, of the novel of Romanos I—or whether he wished, at the same time, to introduce a general ban on the acquisition by the *dynatoi* of his time of the land of the poor by *antichresis*. This question cannot be answered, since it is impossible to know what the real will of the legislator may have been. However, it has to be reiterated that the novel “concerning *protimesis*” displays in its various forms variations, especially where the *dynatoi* are concerned, that lead to the conclusion that the authentic text has certainly undergone elaboration.

⁴⁵ Macrides, “Justice,” 178.

Byzantine Legislation on Economic Activity Relative to Social Class

Eleutheria Papagianni

The sixth and seventh centuries are generally seen as the period in which Byzantine law per se begins to take shape, in the form primarily of the elaboration of the texts that Justinian had codified by the *antecessores* and the *scholastikoi*. Byzantine law was thus a set of rules that grew beneath the weight of classical and postclassical Roman law as it had crystallized in the Justinianic codification. Byzantine society always defined itself as a continuation of Rome: as a result, it adopted, initially at any rate, the Roman division into social classes to each of which the practicing of certain types of work was fitting.¹ This distribution of occupational and, more generally, economic activity by social class can be seen in the pre-Justinianic provisions codified in the sixth century and Hellenized and recodified in the middle period. For those reasons, the citation of passages from the *Basilics* in which earlier law is enshrined can convey quite a vivid picture of Byzantine beliefs about the predetermined social roles of the various classes and also about the exercise of economic activity, as inherited from the Roman order of law.

Let no merchant or banker or publican or other persons of lowly standing aspire to office; and if he so becomes, let him be returned to his own guild.²

We prohibit those of high birth and those lambent with the light of honors, and those substantially more wealthy, from things connected with the base trade of

This chapter was translated by John Solman.

¹ A basic bibliography is not provided here because, at least as far as I am aware, the main theme has not been dealt with separately. The conclusions arrived at in this chapter are based on a joint reading of various apparently unconnected texts and on their interpretation. For bibliographical information, see the notes below, which concern the individual sources and the information to be derived from them. Cf. also G. Dagron, "The Urban Economy, Seventh–Twelfth Centuries," *EHB* 414ff and *passim*.

² Μηδεὶς ἔμπορος ἢ μονητάριος ἢ τελώνης ἢ ἀπὸ εὐτελοῦς ὀφφικίου ἐπιχειρεῖτω γίνεσθαι ἀξιωματικός: εἰ δὲ καὶ γένηται πάλιν ἀποδιδόσθω τῷ ἰδίῳ σωματείῳ: *CI* 12.1.6 = *Bas.* 6.1.23 (from 357–360).

the city so as to facilitate the transactions of buying and selling between citizens and merchants.³

Let no person be admitted to the public guilds indiscriminately, unless as is required he is of an appropriate family and age and a craftsman, an instrument to this effect being drawn by the *archon* of the province and the guild deposing that he is a craftsman; and let these things be reported to us, so that we again can ratify them through our divine syllables which will serve as proof. If anyone shall infringe these things . . . he shall be tortured and exiled in perpetuity from the province, and any accomplice shall be subject to the same punishments, particularly if he is the *praiapositos*.⁴

The connection between the first provision and our topic is a somewhat indirect one, since it does not refer to the occupational and more generally economic activities in which the members of the various social classes were permitted to engage, but tells us which persons were excluded from undertaking state positions because of the work they did and thus, by extension, of their social position. However, the second passage refers directly to a prohibition, by social criterion, from engaging in occupational activities: it can be seen from this that trade was not a fitting occupation for persons of noble descent and affluence, presumably because it was seen as a baser, and perhaps even contemptible, form of activity.

Even so, the continuation of this passage allows us to speculate that the legislator's intent was not only to keep the upper classes free from the "pollution" of involvement in humble activities, but also to protect ordinary citizens from merchants of such social influence and prosperity that they would have an adverse effect on the way in which business was done. There may have been a fear that if persons of great wealth were to engage in trade, they might take advantage of their ability to mobilize large sums of capital to create monopoly conditions; furthermore, since such persons were less in awe of authority than ordinary people, they might be able to impose a principle of "might makes right" in their relations with the public and could become a menace for the less fortunate when they had to purchase the goods they needed from such persons.

The last phrase of the first passage refers to the organization of manufacturing activities around the *somateia* or corporations. Although it cannot be dated with precision,

³ Τοὺς ἐπισήμους τῇ γεννήσει καὶ τῷ τῶν τιμῶν φωτὶ προλάμποντας καὶ ἐν οὐσίᾳ πλουσιωτέρους τῆς ὀλεθρίας τῶν ἐν ταῖς πόλεσιν ἐμπορίας κωλύομεν, ἵνα μεταξὺ τοῦ ιδιώτου καὶ τοῦ πραγματευτοῦ εὐχερὲς εἴη τὸ τοῦ πιπράσκειν καὶ ἀγοράζειν συνάλλαγμα: *CI* 4.63.3 = *Bas.* 56.1.19 (the year 408 or 409).

⁴ Μηδεὶς ὡς ἔτυχε τοῖς δημοσίοις σωματείοις ἐγγραφέσθω, εἰ μὴ κατὰ τὸ ἀναγκαῖον καὶ ἐκ γένους ὧν τοιοῦτου καὶ ἡλικίας καὶ τέχνης ἐστὶν ἐπιτήδειος, πράξεως γινομένης ἐπὶ τούτῳ παρὰ τῷ ἄρχοντι τῆς ἐπαρχίας καὶ κατατιθεμένου τοῦ σωματείου, ὅτι ἐπιτήδειος ἔστι: καὶ τὰ πραττόμενα εἰς ἡμᾶς ἀναφερέσθω, ὥστε ἡμᾶς πάλιν ἐπικυρώσαι διὰ τῶν θεῶν συλλαβῶν τάξιν προβατορίας λαμβανουσῶν. Εἰ δὲ παραβαίῃ ταῦτα τις (. . .) βασανισθεὶς ἐξορισθήσεται διηλεκτῶς τῆς ἐπαρχίας, καὶ πᾶς δὲ συνεργήσας τοῖς αὐτοῖς ἐπιτιμίῳ ὑποκείμεται καὶ μάλιστα ὁ πραιπόσιτος: *CI* 11.8.16 = *Bas.* 54.16.16. This passage in Greek, contained without a heading or a date in the edition of the Code of Justinian, was included in the most recent edition of the *Basilics* on the basis of the work of Jacques Cujas, who possessed a manuscript now lost. As a result, it is impossible to arrive at any secure conclusions as to its origins.

the third passage is particularly useful for a study of this question during the early centuries of Byzantium: according to it, the *somateia* were under state control, were headed by their chiefs, and received as members those who practiced the various *technai* or crafts. Membership was not open to all: candidates had to belong to a family that had a connection with the *somateion* (most probably with the specific corporation), had to be of lawful age (though what this was we do not know), and had to be versed in the craft practiced. Even if these conditions were fulfilled, the candidate's membership had to be approved by the state. There can be no doubt that we are dealing here with a form of guild organization of the artisans, one that we know to have existed in the early Byzantine period.⁵ It would seem, then, that even at an early date the question of how the "humble" occupations were to be organized and practiced was of interest to the legislator.

The inclusion of these provisions in the *Basilics* is an incontrovertible indication that they were not completely alien to the social and economic conditions of the time. That, however, is not to say that their content is a faithful reflection of the situation in the period covered by the present volume. In other words, the failure to eject them from the Byzantine order of law is simply indicative of an insistence that the state should continue to control the market, connected with adherence to the organization of the market around the guilds. However, the extent to which the Roman concept of the compartmentalization of the social classes insofar as their economic activities were concerned—which, as an idea, survived for centuries—actually applied rigidly in practice can only be deduced from a study of new legislation.

Those who wish to gain as clear a picture as possible of at least one section of the Byzantine market need look no further than the *Book of the Eparch* of Leo VI, published in 911/912 and constituting a detailed, if not complete, code of market regulations.⁶ The *Book of the Eparch* refers to twenty-one occupations or groups of allied occupations that were organized as guilds and acted under the supervision of the eparch of the city. It describes in detail the internal organization of the guilds, the frameworks within which each of them conducted its productive activities, and their obligations toward the state, the public, and other artisans. This makes it an extremely interesting source for the organization of economic life (of Constantinople only, unfortunately) compiled at the heart of the period that interests us, and for that reason it deserves examination as to the extent to which it contains regulations connected with the social origins of the various artisans.

To begin with the "noble" guild of the *taboullarioi*, or notaries, one immediately notices that a knowledge of the law, good handwriting, and *boni mores* are the only qualifi-

⁵ See F. Dölger, "Die frühbyzantinische und byzantinische beeinflusste Stadt (V.–VIII. Jahrhundert)," in ΠΑΡΑΣΠΟΡΑ: *Dreißig Aufsätze zur Geschichte, Kultur und Sprache des byzantinischen Reiches* (Ettal, 1961), 131–35.

⁶ For a bibliography and commentary on the *Book of the Eparch*, see the most recent edition by J. Koder, ed., *Das Eparchenbuch Leons des Weisen* (Vienna, 1991), 13–41. Cf. Dagron, "Urban Economy," 407.

cations stated for admission.⁷ Further evidence of “meritocratic” criteria by which the *taboullarioi* were selected is that they were “not appointed to this post by reason of favor or request or kinship or friendship but by reason of virtue and knowledge and prudence and being competent in all respects.”⁸ It can be concluded with certainty from this passage that the office of notary was not hereditary. However, it seems unlikely that individuals without some financial competence would have been able to practice this occupation, since the *Book of the Eparch* itself tells us that registration had to be accompanied by the payment of a fee of 32 nomismata, a large sum for the time.⁹

According to the information contained in our source, fees (*synetheiai*) were not paid for admission to all the guilds, and it seems very likely that decisions as to such fees were taken by the state on the basis of the current economic policy, of the number of possible candidates for membership in each guild, and the profits involved in the exercise of each occupation.¹⁰ However, in no case do the *synetheiai* amount to anything like the fees required of *taboullarioi*. It is surprising to find that no mention is made of the payment of fees for admission to the guild of bankers, which, of course, played a much more important part than that of the notaries in the economic life of the capital, in its narrow sense. It seems to have been sufficient that prospective members of the bankers’ guild could produce assurances from respectable witnesses to the effect that they would discharge their duties conscientiously and, most importantly, that they would not counterfeit the coinage.¹¹ It may be, then, that precisely because of the sensitivity of the area of the economy in which bankers were involved, the state attempted to ensure that the persons selected were noted for their honesty, without setting financial obligations with which such persons might have been unable to comply. In general, it could be said that the qualifications of *boni mores* and professional competence were the only requirements specifically determined by the *Book of the Eparch* for admission to the guilds, regardless of the social prestige that some of these guilds may have enjoyed.¹² The fact that requirements are not stated for each occupation can probably be attributed to the source’s nature as a compilation—and one that we know not to be complete in providing answers to all the questions that may arise in the mind of the modern reader. The lack of any reference to such requirements, taken in conjunction with the provisions concerning *taboullarioi*, confirms, to my mind, the prevailing view that after the early Byzantine period admission to the guilds of artisans was not dependent on the candidate’s descent from a family of fellow craftsmen.¹³

⁷ See *Book of the Eparch*, ed. Koder, 1.1, and Dagron, “Urban Economy,” 408–10.

⁸ τοῦ μὴ διὰ τινα χάριν ἢ παράκλησιν ἢ συγγένειαν ἢ φιλίαν τοῦτον τῷ βαθμῷ ἐντάττεσθαι, ἀλλὰ δι’ ἀρετὴν καὶ γνῶσιν καὶ σύνεσιν καὶ τὸ ἱκανὸν εἶναι ἐν πᾶσι . . . : Koder, *Book of the Eparch*, 1.3, and Dagron, “Urban Economy,” 408–9.

⁹ See *Book of the Eparch*, ed. Koder, 1.14, and S. Troianos, “Ἡ θέσις τοῦ νομικοῦ/δικαστῆ στή βυζαντινὴ κοινωνία (Athens, 1993), 23. There were 24 *taboullarioi*, a *numerus clausus*.

¹⁰ See A. Christophilopoulos, Τό Ἐπαρχικόν Βιβλίον Λέοντος τοῦ Σοφοῦ καὶ αἱ συντεχνίαι ἐν Βυζαντίῳ (Athens, 1935), 53–54.

¹¹ See *Book of the Eparch*, ed. Koder, 3.1.

¹² See *ibid.*, 4.5, 16.1, and Christophilopoulos, Ἐπαρχικόν Βιβλίον, 50 n. 4.

¹³ See G. Weiss, “Antike und Byzanz: Die Kontinuität der Gesellschaftsstruktur,” *HZ* 224 (1977): 541, and B. Malich, “Wer Handwerker ist, soll nicht Kaufmann sein: Ein Grundsatz des byzantin-

This picture of the development (in Constantinople in the 10th century) of economic activities without any particularly prohibitive social or economic constraints is obfuscated by chapter 7 of the *Book of the Eparch*, “concerning *katartarioi*.” The passages at 7.2, 3, and 5 have created in the minds of some scholars the impression that slaves¹⁴ or poor persons were not eligible for membership in the guild of the *katartarioi*. Dieter Simon conducted a systematic investigation of the problem of the *katartarioi* some twenty years ago,¹⁵ and to the best of my knowledge his findings have not been refuted. According to Simon,¹⁶ the *katartarioi* were manual workers—men and women—who dealt with the intermediate stage in the processing of silk, making it suitable for weaving and then selling it. It seems likely that they originated in the classes that were financially poor and socially of low standing. The conditions set by the *Book of the Eparch*, that they should not be slaves “or completely destitute or open to reproach” (ἢ παντελῶς ἄποροι καὶ διαβεβλημένοι), applied, in Simon’s view, only to *katartarioi* who wished to collaborate with the *metaxopratai*, the main silk merchants of Constantinople, in the procurement of raw silk. The restriction was obviously intended to prevent the direct involvement of persons of low social background in the process by which the capital obtained its precious silk.

On the basis of this, then, one is justified in contending that the *Book of the Eparch* shows that, theoretically, even the humbler members of society were entitled to develop occupational activities almost without restriction, as long as they possessed the requisite skills. However, some passages in the source—once again, referring to trade in the various forms of silk—have provided scholars with an opening to approach the problem from another aspect. Was it perhaps the case, they have asked, that the *Book of the Eparch* actually prohibited the involvement of the *dynatoi* in this kind of economic activity, in advance of all the rest of the relevant legislation introduced by the Macedonian emperors?

Here again the views of Simon¹⁷ differ from those of earlier scholars. As he correctly observes, it is, to begin with, impossible to assume that these provisions were intended to protect “poor” merchants against the competition of the *dynatoi* because such a policy is not apparent, even indirectly, in any passage in the source. What the *Book of the Eparch* forbids to the *dynatoi*—or *archontes*, as it often calls them—is their involvement in parallel commerce and the exploitation of their economic power for the purposes of private production. The frequent and specific references to the economically and socially privileged in the provisions connected with the prevention of parallel commerce must be primarily the result of their greater interest than ordinary people in acquiring silk. Unlikely though it may appear—and despite the lack of direct refer-

ischen Wirtschaftslebens im 8./9. Jahrhundert,” in *Studien zum 8. und 9. Jahrhundert in Byzanz*, ed. H. Köpstein and F. Winkelmann (Berlin, 1983), 55.

¹⁴ From a study of the remaining provisions of the *Book of the Eparch*, it emerges that slaves were entitled to become members of the guilds of Constantinople. See Christophilopoulos, “Ἐπαρχικὸν Βιβλίον,” 51–52; for the slaves, cf. Dagron, “Urban Economy,” 418–22.

¹⁵ See D. Simon, “Die byzantinischen Seidenzünfte,” *BZ* 68 (1975): 23–46.

¹⁶ *Ibid.*, 24–25, 44–46.

¹⁷ *Ibid.*, 40–44; for the *archons*, cf. Dagron, “Urban Economy,” 422–23.

ences in the sources—during the tenth century it was theoretically possible for an *archon* to deal in silk (or in any other product, for that matter) as long as he obeyed the rules that applied to the artisans organized into guilds.

One of these rules was, of course, the avoidance of competitive practices, which took the form principally of the exercising of strictly predetermined occupational activities. However, none of the provisions of the specific source permits us to conclude that artisans with a smaller turnover were in any way protected against those whose turnover was greater. There are, of course, provisions in which a tendency to protect the economically weaker artisans can be detected: specifically, the *Book of the Eparch* provides for penal sanctions against those who, wishing to acquire the tenancy of a shop (*ergasterion*), offered its owner a larger rent so as to bring about the eviction of the sitting tenant.¹⁸ This arrangement cannot, however, be linked to the protection of one social group against another;¹⁹ it is simply one more instance of the efforts of those who compiled the book to maintain “order” in the market.

The *Book of the Eparch*, then, does not belong either to those legislative texts whose purpose was to distribute economic activity on the criterion of social origins, or to those that strove to protect the poor against the *dynatoi*. Examples of this are to be found in the later legislation of the Macedonian emperors, much of which, as we know, revolved around this question. The novel issued by Basil II in 996,²⁰ which is the chronologically last attempt to restrain the power of the *dynatoi*, contains, in its closing chapter,²¹ provisions that concern the exercise of economic activities in accordance with social class. Among the most interesting features of this novel is the fact that it refers to the exercising of a kind of commerce that differs somewhat from that described in the *Book of the Eparch*. Basil’s law deals with the fairs (*panegyreis*, *phoroi*) that took place at regular intervals both in the cities and in country areas. In view of the general contents of this novel, it seems highly likely that the legislator wished to concentrate in particular on the fairs held in the countryside, although this is not to say that the relevant rules could not have been applied, *mutatis mutandis*, to those taking place in the urban centers.²²

The novel deals with fairs held on ground controlled by private, though not necessarily natural, persons. In other words, I believe that these fairs should be distinguished from those to which the *Book of the Eparch* refers, which must have been closer to what we think of today as “street markets” and which were held very frequently in the various districts of Constantinople.²³ Nothing can be said with certainty about the

¹⁸ See *Book of the Eparch*, ed. Koder, 4.9, 9.4, 10.3, 11.7, 13.6, 18.5, 19.2.

¹⁹ This is the view held by Malich (“Handwerker,” 50–52), but I do not believe it reflects the true situation.

²⁰ N. Svoronos, *Les Nouvelles des empereurs macédoniens concernant la terre et les stratiotes*, ed. P. Gounaridis (Athens, 1994), 190–217; F. Dölger, *Regesten der Kaiserurkunden des oströmischen Reiches* (Munich–Berlin, 1924), no. 783; cf. A. E. Laiou, “Exchange and Trade, Seventh–Twelfth Centuries,” *EHB* 714.

²¹ Svoronos, *Nouvelles*, 216–17.

²² See also A. E. Laiou, “Händler und Kaufleute auf dem Jahrmarkt,” in *Fest und Alltag in Byzanz*, ed. G. Prinzing and D. Simon (Munich, 1990), 56.

²³ See Christophilopoulos, *Ἐπαρχικόν Βιβλίον*, 71–72.

frequency of the fairs dealt with in the novel of Basil II. Given that they may correspond to the fairs still held throughout Greece, the point in time at which they took place may have depended on the event that gave rise to them, such as the celebration of the memory of a saint or a local custom. In order for a fair to take place, a suitable site was of course needed—belonging, according to the wording of the novel, to the lord of the fair (*despotes tes panegyreos*)—together with the “merchants who make up the fair,” also referred to in the text as *panegyristai*. The *despotes* might be a local landowner, but he might also be an ecclesiastical foundation. As can be deduced from the source under examination, he might also be a community of peasants.²⁴ The *panegyristai* were merchants or other professionals, and they might be locals or travel to the fair from other places, sometimes far away. It would seem that the nucleus, at least, of the *panegyristai* who made up a fair consisted of the same people each time, and that they had some form of internal organization that allowed them to make joint decisions.²⁵ Given the range of activities in which they engaged, one cannot speak of a guild in any way resembling that of the *Book of the Eparch*; it seems more likely that what existed was a relationship of association (*koinonia*),²⁶ which, however, in Roman as in Byzantine law is very hard to distinguish from the contract of *hetaireia* (partnership), with which it tends to be confused in the terminology. Unfortunately, the surviving evidence is not sufficient to indicate whether there was a substantial relationship of *hetaireia* among the *panegyristai*. We can be sure, at all events, that participation in the fair brought profit to them, and it was also of economic interest for the *despotes* because it yielded revenue that usually took the form of a levy of some kind.²⁷

In regulating the question of the conditions on which a fair could change venue, the novel of 996 is bound up with the economic activities both of the *panegyristai* and of the lord of the fair, and, as one would expect, it approaches the question with the intention of favoring the economically weaker. Given that the purpose of the legislator was to protect the smallholders of country areas, they, and not the members of the group of *panegyristai*, were the persons favored. Indeed, the law makes not the slightest reference to the economic situation or social position of the *panegyristai*, although it allows to them, in principle, the right to change the venue of the fair if they decided to do so unanimously and without pressure. In the event of disagreement, “the tradition of former times” must be maintained. However, this was only applicable in the following three instances: if the present and the prospective *despotes* were both *dynatoi*, if neither of them was a *dynatos*, or if the fair was to be moved from the land of a *dynatos* to that of a person who was not a *dynatos*. If the question had arisen of moving the venue from the land of a *despotes* who was not a *dynatos* to one who was, then stricter conditions had to be complied with. It was essential in this case that the decision of the *panegyristai* be unanimous and free, but this was not sufficient; it had to be supplemented by “the law of former times.” This specific passage in the novel tells us what

²⁴ See Laiou, “Händler,” 62–63.

²⁵ Ibid., 56–57.

²⁶ Ibid., 70.

²⁷ Ibid., 62–63.

this meant, and I believe the same definition applies to the other instances in which the same consideration was important: the new venue had to be not a new one, but one with an “old privilege,” that is, one where it had been the custom to hold the fair in the past. In effect, we are dealing with the return of the fair to its natural venue, from which it had at some point in the past departed. It cannot be deduced from the novel whether the furnishing of written evidence (such as an imperial permit) was necessary to prove the antiquity of the new venue and the lawfulness of holding the fair there. It is equally unclear whether a statute of limitations on rights played any part in securing the “law of former times,” or whether this question was regulated solely by customary law.

Bearing in mind the main purpose of Basil’s law, it is my impression that the legislator left quite a number of matters vague so as to allow them to be used for the benefit of the weak. It is therefore interesting to see how the novel was implemented fifty years after it had been issued, at a time when the struggle between the central authorities and the *dynatoi* had died down. The *Peira* provides us with information in this respect. Presumably because of its nature as a work of case law, the relevant chapter²⁸ lacks the detailed wording of the novel, but perhaps its laconic presentation of the problem constitutes evidence of the way in which the law was implemented in practice. The thinking of Eustathios Rhomaïos, who himself must have sat in judgment on such cases, is comparatively pragmatic in connection with the resolution of disputes between the *dynatoi* over fairs. The *panegyristai* were entitled, alone, to decide on the place where the fair ought to be held; at the end of the day, they were the people who actually created the fair by attending it and engaging in their occupational activities there, and there was thus no reason to give heed to the “rights” of the *despotes*. As for the *dynatoi*, it was well known that they attracted *panegyristai* “by means of gifts and treats” (δῶροις καὶ κεράσμασι). Let them continue to compete with one another, then, and let the most generous win the right to hold the fair.

Matters became more complicated when the dispute arose between a *dynatos* and a “poor” person. In such cases, the court would require that the *dynatos* should prove *pistin dikaionaton* and *chronou boetheian*: the first of these terms probably meant the presentation of written evidence that the right existed, while it is not impossible that the second is a reference to the lawful time limits within which rights arose and were extinguished, given that this wording is quite common in Byzantine legal sources in connection with such time limits. It may be that the introduction of these legal time limits favored the *dynatoi*, who would need to prove only that the fair had been taking place on their ground for a given period of time, and would not necessarily need to give evidence of a right existing in former times.²⁹ Another requirement of a *dynatos* claiming that he drew the right to hold a fair from long-standing practice was that he should prove that he had not forcibly caused the *panegyristai* to assemble on his land.

Of greater interest for the economic aspect of the question is the reference to the

²⁸ *Peira*, 57.1 (Zepos, *Jus*, 4:228).

²⁹ On this subject, see also Laiou, “Händler,” 55–56.

obligation on those claiming the right to hold such fairs on their land—regardless of their social origins, I believe—to prove that ἐξ οἰκεῖων συνεστήσαντο τὰς πανηγύρεις. I believe that this wording reveals that the economic participation of the *despotes* in organizing the fair was not confined only to providing the space and, possibly, making other grants: it also involved his securing, by his own means, the conditions necessary for the fair to take place, by making sure that the ground was cleared, providing accommodation for the *panegyristai*, and so on. Of course, I imagine that only the *dynatoi* would have been able to exert the kind of pressure over at least the artisans of their own area needed to attract them to fairs on their ground without providing even the most rudimentary facilities, but however the case may have been, the *despotes*, whether he was a *dynatos* or a poor person, functioned in these cases both as a lessor of land and as an “investor.”

The *Book of the Eparch* of Leo VI and the chapter of the novel of 996 dealing with fairs (together with the manner in which it was implemented by the supreme court of Constantinople) provide indirect but persuasive evidence of the fact that the Byzantine legislators and judges of the middle period placed obstacles in the way of the economic activities of certain social groups—not in order to maintain the social status quo in the field of employment, but probably in order to protect the interests of the state and of the citizens. Another text of a legislative nature dating from the late eleventh or early twelfth century shows still more clearly that Byzantine society was evolving away from the Roman precepts enshrined in the various collections of laws. This is a legislative act of Alexios I Komnenos,³⁰ issued to settle a specific problem but, as the text itself determines, of a wider application. It describes the following facts.

During the course of litigation between one Anna Paidianite and her uncles, it became necessary to extract an oath from the latter. They petitioned to be allowed to take the oath in their homes because they were members of the senate.³¹ Anna, however, insisted that they should take the oath in public, arguing that her opponents were actually merchants. The dispute ultimately came before the emperor, who decreed as follows: “It is necessary to administer the oath at home to those members of the senate who are not registered as members of guilds subject to the eparch but who protect the majesty of their office; those who are members of guilds and wish to engage in trade shall not enjoy this privilege. But since they have derived profit from trade and chosen to be members of guilds, they shall take the oath in public as do those who do not have an office. And it is our wish that this law not be temporary but be regarded as an order by all judges henceforth.”³²

³⁰ Zepos, *Jus*, 1:645–46; F. Dölger and P. Wirth, *Regesten der Kaiserurkunden des oströmischen Reiches* (Munich, 1995), no. 1162a, year 1091 or 1106.

³¹ For the various privileges of the members of the senate, see A. Christophilopoulou, “Ἡ Σύγκλητος εἰς τὸ Βυζαντινὸν Κράτος,” *Ἐπετηρίς τοῦ Ἀρχείου τῆς Ἱστορίας τοῦ Ἑλληνικοῦ Δικαίου* 2 (1949).

³² ἐκεῖνους τοὺς συγκλητικοὺς χρεῶν εἶναι οἴκοι ὁμνύειν, τοὺς μὴ εἰς σύστημα ὅλως καταγεγραμμένους, ὑποκείμενον τῷ ἐπάρχῳ, ἀλλὰ τὸ τοῦ ἀξιώματος φυλάττοντας μέγεθος τοὺς δὲ συστηματικούς καὶ πραγματεύεσθαι βουλομένους, μὴ τοῦ προνομίου τούτου ἀπολάβειν. Ἄλλ’ ἐπειδὴ τὸ τῆς πραγματείας ἡρετίσαντο κέρδος καὶ τὸ συστηματικοὶ εἶναι μᾶλλον ἡγάπησαν, δημοσίᾳ τούτους ὁμνύειν καθάπερ τοὺς μηδενὸς

It emerges from this that during the time of the Komnenoi members of the senate were among those who engaged in commerce, and indeed did so as members of guilds. This phenomenon should not come as any particular surprise, since as far back as the time of Constantine IX Monomachos (1042–55) persons from a wider range of social strata, including merchants and manufacturers, began to be accepted as members of the senate, and this policy was continued by the Monomachos' successors, especially by Constantine X Doukas (1059–67).³³ Regardless of whether or not one can find grounds for accepting the hypothesis of H.-G. Beck—that these merchants were attempting, little by little, to detach themselves from the “middle class” and become fully integrated into the “aristocracy”³⁴—it seems certain that the systematic involvement of members of the senate in commerce was a real phenomenon in the economic life of the capital during and after the eleventh century. Against that background, it is more or less self-evident that although Alexios I does not seem to have believed that to engage in commerce was a fitting activity for the members of the senatorial aristocracy, he does not claim that it is forbidden, nor does he forbid it for the future. To oblige the “noble” merchants to submit themselves in public to the taking of an oath as a means of proof was not a particularly burdensome measure, but should be seen as a natural consequence of their occupation. The administration of oaths in the home was reserved for the holders of various offices so as to protect their dignity and credibility—to “protect the institutions,” as we might say nowadays. However, when such individuals also practiced trade and their occupation brought them into everyday contact with a wide range of people, when they were active in the market, and when they engaged in commercial agreements and transactions, they had already lost much of their social prestige and there were no grounds for asserting that they should not take the oath in public.

The other interesting feature of Alexios' law is its testimony to the existence of occupational groups organized as guilds acting under the supervision of the eparch of the city some two hundred years after the publication of the *Book of the Eparch*. An order issued by Manuel I Komnenos after the mid-twelfth century leads to a similar conclusion.³⁵ It concerns the banking activity in which “reputable [ἀξιόλογα] and Roman persons” ought to engage with the approval of the eparch. It is impossible to say whether by “reputable” the imperial order was referring only to the moral rectitude that the *Book of the Eparch* demands for bankers, or whether some fairly elevated social origin

τετυχηκότας ἀξιώματος. Καὶ τοῦτον τὸν νόμον μὴ καιρικὸν εἶναι, ἀλλ' εἰς τὸ ἐξῆς παρὰ πᾶσι δικασταῖς κρατεῖν διάταγμα εὐδοκοῦμεν. Zepos, *Jus*, 1:645, line 31–646, line 2.

³³ See S. Vryonis, “Byzantine Δημοκρατία and the Guilds in the Eleventh Century,” *DOP* 17 (1963): 302–14; P. Lemerle, “Byzance au tournant de son destin, 1025–1118,” *Cinq études sur le XIe siècle byzantin* (Paris, 1977), 287–93 (art. 5); E. Christou, “Σύγκλητος-Συγκλητικοί κατά τή μέση βυζαντινή περίοδο,” *Βυζαντικά* 14 (1994): 196–97. Cf. Dagron, “Urban Economy,” 415, and Laiou, “Exchange and Trade,” 753.

³⁴ See H.-G. Beck, “Senat und Volk von Konstantinopel: Probleme der byzantinischen Verfassungsgeschichte,” *Sitzungsberichte der Bayerischen Akademie der Wissenschaften. Philosophisch-Historische Klasse* (Munich, 1966) (repr. in idem, *Ideen und Realitäten im Byzanz* [London, 1972]), art. 12: 61–62.

³⁵ Zepos, *Jus*, 1:416–17; Dölger, *Regesten*, no. 1384 (year 1151 or 1161).

or financial good standing was also required. It is certain, however, that foreigners were not permitted to work as bankers in Constantinople during the twelfth century. Yet the specific mention of this in Manuel's order may be no more than the express statement of something that had been self-evident in the past but that now needed to be emphasized in view of the large numbers of aliens who were engaged in commerce in the Byzantine capital during the time of the Komnenoi.

The organization of certain occupations in the form of guilds must have survived into the thirteenth and fourteenth centuries.³⁶ At that time, the class of merchants and artisans flourished as never before and slowly evolved into a social group with a significant economic and social role. In the late Byzantine period, commerce as an occupation began to attract more and more people of "noble" descent, perhaps because the loss of many of the imperial territories had brought to an end the prosperity of landowners.³⁷ On the other hand, the increased influence of Venetian and Genoese merchants on the economic life of Constantinople had led to the creation of Byzantine replicas of the forms of partnership that trade took in the West. Among such partnerships were the *societates* (*syntrophiai*) that operated on land and the unilateral and bilateral *commenda* active in maritime trade; aristocrats were commonly involved in many of these partnerships, being fully aware, as members of a society in decline, of the power that money could bestow.³⁸ It could thus be said that during the last centuries of Byzantium it was not the desire of the merchants to be accepted into what might be termed the "aristocracy"; on the contrary, the aristocrats were very interested in becoming involved in profitable commercial activities.

³⁶ See N. Oikonomides, *Hommes d'affaires grecs et latins à Constantinople, XIIIe-XVe siècles* (Montreal, 1979), 108–14.

³⁷ See *ibid.*, 114–23.

³⁸ See A. E. Laiou-Thomadakis, "The Byzantine Economy in the Mediterranean Trade System, Thirteenth–Fifteenth Centuries," *DOP* 34/35 (1980–81): 198–205, and cf. E. Papagianni, "Εμπορικές επιχειρήσεις Κωνσταντινοπολιτών κατά τά ἔτη 1399–1401: Ὁ ὅρος συντροφία στα Acta Patriarchatus Constantinopolitani," *Ἐνθύμημα Ἀλκή Ἀργυριάδη* (Athens, 1995), 735–45; cf. K.-P. Matschke, "Commerce, Trade, Markets, and Money, Thirteenth–Fifteenth Centuries," *EHB* 803–5.

The Byzantine Law of Interest

Demetrios Gofas

By the end of the postclassical period of Roman law, the rate of interest on monetary debts had climbed slightly. This was the result of the currency reform of Constantine the Great, who had set the value of the gold solidus (aureus or nomisma) at $\frac{1}{72}$ of a litra of gold and divided it into 24 silver siliquae (*keratia*). As a consequence, the *hekatostaios tokos* (*centesimae usurae*) of classical Roman law, which corresponded to precisely 1% per month or 12% on an annual basis,¹ ceased to be an absolute rate as it had been in the past and was set at 3 *keratia* per month—that is, $\frac{1}{8}$ of a nomisma—amounting to 12.5% per year. In practice, however, the term *hekatostai* continued to be used.²

In parallel, some more specific instances of payment of interest had come into being, including debts that were not in cash but in kind, where under the influence of the Hellenistic *hemiolion* or *hemiolia* the interest rate was 50%.³ The *hemiolion* was also applicable in cases of cash debts, but on condition that two months had elapsed since the issuing of a court decision finding the debtor guilty, that he had failed to discharge his obligation, and that the creditor had taken measures to have the court confirm that

This chapter was translated by John Solman. Because of the indisposition of Professor Gofas, certain essential changes to the text and notes were made by A. E. Laiou.

¹ G. Billeter, *Geschichte des Zinsfusses im griechisch-römischen Altertum bis auf Justinian* (Leipzig, 1898; repr. Vaduz, 1970), 269 n. 1; E. Levy, *Weströmisches Vulgarrecht: Das Obligationenrecht* (Weimar, 1956), 161–62; M. Kaser, *Das römische Privatrecht*, 2d ed. (Munich, 1975), 2:341 (hereafter *RPR*).

² Cf. IP (Interpretatio) in *Pauli Sententiae* (P. F. Girard, *Textes de droit romain*, 7th ed. (Paris, 1967), 1:381, ad PS 2.14.1 and 2), which expressly mentions “centesimae”; Levy, *Weströmisches Vulgarrecht*, 162 n. 27. Ed. note: It should be noted that the slight increase in the annual interest rate, from 12%, 8%, 6%, and 4% to 12.5%, 8.33%, 6.24%, and 4.2%, respectively, is neither of legal significance, as Billeter, *Geschichte des Zinsfusses*, 269 n. 1, correctly points out, nor, if the truth be told, of economic importance. When the sources of the period give the interest rate as a proportion, as in *CI* 4.32.36 = *Bas.* 23.3.74, it is always 12%, and so on. However, when the interest rate is expressed as a subdivision of the gold nomisma, as in Justinian’s Novel 32, then of necessity it is slightly higher, since, for example, 1 keration on the nomisma or $\frac{1}{24}$ of the nomisma is 4.2% and not 4%. See A. E. Laiou, “Exchange and Trade, Seventh–Twelfth Centuries,” *EHB* 710 n. 63. This artificial increment should not be seen as an increase in interest rates as the result of economic factors.

³ L. Mitteis, *Reichsrecht und Volksrecht in den östlichen Provinzen des römischen Kaiserreichs* (Leipzig, 1891; repr. Hildesheim, 1963), 513–14; Levy, *Weströmisches Vulgarrecht*, 116. Cf. *CTh* de usuris 2.33.1, Constantine the Great, year 326. Mitteis, *Reichsrecht*, 513, and Billeter, *Geschichte des Zinsfusses*, 267 and 303, date it to A.D. 325.

the debtor had not complied with the decision. In this instance, furthermore, the interest was doubled as of the date on which the decision was issued.⁴ Another case in which the rate of interest might be higher than 12.5% per year was that of maritime loans, in which the rate was unrestricted.⁵

By way of contrast, the maximum rate of interest that members of the class of the *illustres* (*synkletikoi*) could charge on loans they granted was limited to half a *hekatoste* per month, or 6% (= 6.25%) per year.⁶

The charging of interest, at whatever rate, always encountered the strong disapprobation of the church.⁷ The most important ecclesiastical writers and orators disapproved of it,⁸ though they never reached the point of prohibiting it, and clergymen were expressly forbidden to charge interest. This ban was enshrined in various ecclesiastical texts, the most important prohibition being that of a canon issued by the ecumenical Council of Nicaea in 325. Clergymen who violated the rule were liable to be deposed.⁹

The legislation of Justinian, under the influence of the concepts of the church, frowned upon the charging of interest and attempted to restrict it. The fundamental provision regarding this is in the Justinianic Code.¹⁰ The maximum rate of interest was set, as a rule, at 6% (= 6.25%), whereas for the *illustres* and those still higher in rank the limit was even stricter: a maximum rate of 4% (= 4.2%).¹¹ However, in the case of some categories of persons involved in trade, Justinian set an interest rate higher than the generally applicable 6%. For those in charge of commercial establishments (“qui ergasteriis praesunt”),¹² for example, the maximum rate was set at 8% (=

⁴ *CTh* 4.19.1 pr. and 1, year 380, with IP. Cf. Levy, *Weströmisches Vulgarrecht*, 116; M. Kaser, *Das römische Zivilprozessrecht* (Munich, 1966), 512 n. 7, and idem, *RPR*, 341 n. 44. Billeter, *Geschichte des Zinsfusses*, 260 and 284–86, believes that the text of this provision is partially interpolated.

⁵ *CI* 4.33.1, Diocletian and Maximian, A.D. 286, PS 2.14.3 (Girard, *Textes*, 299) and IP for the provision of PS 2.14.3 in Girard, *Textes*, 381.

⁶ *CTh* 2.33, 4, year 405.

⁷ Psalm 15 asks, “Lord, who shall abide in thy tabernacle?” and the answer includes the person “that putteth not out his money to usury.” For the attitude of the ancient Hebrews to interest, see R. Zimmermann, *The Law of Obligations: Roman Foundations of the Civil Tradition* (Cape Town, 1990), 170 n. 2.

⁸ G. Cassimatis, *Les intérêts dans la législation de Justinien et dans le droit byzantin* (Paris, 1931), 35–37; Billeter, *Geschichte des Zinsfusses*, 237–42.

⁹ Council of Nicaea, canon 17. Cf. Cassimatis, *Intérêts*, 33–35, n. 1; Billeter, *Geschichte des Zinsfusses*, 278–81; and G. Maridakis, *Tò Ἀστικὸν Δίκαιον ἐν ταῖς Νεαπαῖς τῶν Βυζαντινῶν Αὐτοκρατόρων* (Athens, 1922), 223 n. 4, all of whom mention ecclesiastical sources referring to the subject. See also A. E. Laiou, “God and Mammon: Credit, Trade, Profit and the Canonists” in *Tò Βυζάντιο κατὰ τὸν 12^ο αἰῶνα*, ed. N. Oikonomides (Athens, 1991), 261–300, esp. 297–98 n. 103.

¹⁰ *CI* 4.32.26, year 528; see Billeter, *Geschichte des Zinsfusses*, 332, and K. E. Zachariae von Lingenthal, *Geschichte des griechisch-römischen Rechts*, 3d ed. (Berlin, 1892; repr. Aalen, 1955), 310.

¹¹ *CI* 4.32.26.2. The *illustres* were later called *protospatharioi* (Zachariae von Lingenthal, *Geschichte*, 309, and after him Cassimatis, *Intérêts*, 50 n. 3). The *Basilics* (*Bas.* 23.3.74) talk of “on the part of *illustres* and senior persons” (ἀπὸ ἰλλουστρίων καὶ ἀνωτέρων). For an interpretation of the purpose of this provision, see Cassimatis, *Intérêts*, 51–53.

¹² For support for the view that the principal meaning of *ergasterion* was a commercial establishment, see *CI* 12.33(34).1. Cf. LSJ, s.v., and in particular Hyperides, *Κάτ’ Ἀθηνογ.* (IV) 6, and Billeter,

8.33%, the *besses centesimae*) per year. The same rate of 8% (= 8.33%)¹³ was expressly set in the case of bankers by a later provision, Novel 136 of the year 535.¹⁴ In the case of maritime loans, on which the rate of interest had previously been unrestricted, Justinian set a maximum of 12% (= 12.5%), to be calculated by the year.¹⁵

Twelve years later, this provision of Justinianic law was modified by a provision the emperor introduced, as he himself tells us, as an adjustment to the current practice in shipping. The new provision was contained in Novel 106 of 540, the most important innovation of which was the linking of the interest payable to the voyage covered by the loan, regardless of its duration. Novel 106 also ratified a long-standing maritime practice by admitting that the debtor who had received a loan might, at the creditor's discretion, be obliged to ship, free of charge, one modios of wheat or barley belonging to the creditor for each gold nomisma (solidus) of the loan. When this arrangement was applied, the rate of interest would be 10% on the value of the loan; otherwise, it would be 12.5% (i.e., $\frac{1}{8}$ of the principal), regardless of the duration of the voyage.¹⁶ However, although this novel clearly reflected the practice in the Hellenistic maritime world,¹⁷ it was abolished by Justinian only a year later in Novel 110 of 541, which restored the provisions of the Code as they had been implemented before Novel 106.

The Justinianic legislation included special regulations for loans to farmers. If these loans were in kind (*specierum fenori dationes*), Justinian set the rate of interest at 12%.¹⁸ Three novels of 535 fixed the interest rate on loans in kind to farmers in the provinces

Geschichte des Zinsfusses, 332–33. H. Heumann and E. Seckel, *Handlexikon zu den Quellen des römischen Rechts*, 10th ed. (Graz, 1958), s.v., however, believe “Werkstatt” to have been the principal meaning and give that of the shop (“Kramladen”) second, referring specifically to the provision under discussion here.

¹³ The provision of section 4 of Novel 136 refers to this interest rate (8% = 8.33%) as already in force (since 528, under *CI* 4.32.26.2) for bankers. Cf. Cassimatis, *Intérêts*, 46, 52–53.

¹⁴ Novel 136 (year 535), “Concerning transactions involving the changing of money,” 4: “Whereas we have introduced a law to the effect that those in charge of the money-changing banks may not lend at more than two-thirds of *centesimae usurae*, we now determine that this rate [$\frac{2}{3}$ of the *centesimae usurae*] should be paid to them not only in the case of written contracts but for the unwritten ones as well” (Ἐπειδὴ δὲ νόμον ἐθέμεθα, μὴ περαιτέρω τοὺς ἀργύρου τραπεζῆς προεστώτας διμοιραίου τόκου δανείζειν . . . θεσπίζομεν, μὴ μόνον τὸν ἐπερωτήσεως αὐτοῖς δίδοσθαι τόκον, ἀλλὰ καὶ τὸν ἐξ ἀγράφων τοιούτων . . . τουτέστι τὸ ἐκ διμοίρου τῆς ἐκατοστῆς). Cf. also *CI* 4.32, 26.2.

¹⁵ *CI* 4.32.26.2, of the year 528. For bibliography, see D. Gofas, Μελέτες Ἱστορίας τοῦ Ἑλληνικοῦ Δικαίου τῶν Συναλλαγῶν (Athens, 1993), 396 nn. 6 and 7, and 398 n. 17; more specifically, see Cassimatis, *Intérêts*, 54, for the fact that under *CI* 4.32.26.2 interest was calculated per year and not per voyage.

¹⁶ See the preamble to Novel 106 and the observations of A. Biscardi, *Actio pecuniae traiectionis*, 2d ed. (Turin, 1974), 54–56. See also R. Zeno, *Storia del diritto marittimo italiano nel mediterraneo* (Milan, 1946), 22; P. Huvelin, *Etudes d'histoire du droit commercial romain* (Paris, 1929), 208; and Billeter, *Geschichte des Zinsfusses*, 323–30.

¹⁷ Unlike the Romans, the Greeks usually calculated interest by the voyage and not by the year. Cf. U. E. Paoli, “Il prestito marittimo nel diritto attico,” in *Studi di diritto attico* (Florence, 1930; repr. Milan, 1974), 61 and nn. 5, 68; G. Astuti, *Origine e svolgimento storico della commenda fino al secolo XIII* (Casale Monferrato, 1933; repr. Turin, 1993), 112. However, this was not an “Oriental” practice, as Huvelin, *Droit commercial*, 208 and, following him, Astuti, *Commenda*, would have it, but a Greek one.

¹⁸ *CI* 4.32.26.2 of the year 528 (see the text in note 19 below). Cf. Cassimatis, *Intérêts*, 55, and Billeter, *Geschichte des Zinsfusses*, 355.

of Thrace, Illyricum, and Moesia (*Moesia Secunda*)¹⁹ at 12.5%. However, when the loan to the farmer was in cash, one of these three novels (Novel 32) determined the rate of interest as 4% (= 4.2%), setting the maximum payment of interest at one keration (siliqua) per nomisma (solidus) per year.²⁰

In a regulation of a specific character and particular importance, modifying the provisions in force to that time,²¹ the doubling of the interest in the event of a court decision finding the debtor guilty was to occur, under Justinianic law, four months (not two) after the issuing of the decision in question or after its upholding if an appeal (*provocatio*) was lodged against it.²²

In another provision, also of a specific nature, a claim resulting from the formation of a dowry or its return in the event of termination of the marriage was to bear interest at 4% per year after a specific length of time had elapsed from the date of the marriage or its termination. Where the formation of the dowry was concerned, a provision of 530 contained in the Code of Justinian laid down that if, within two years of the wedding, a dowry consisting of cash or of objects evaluated by the person who had undertaken to give the dowry had not been delivered to the beneficiary (the husband), then as of the expiry of the two-year period the person who had undertaken to provide the dowry owed the husband interest at 4% (= 4.2%) per year.²³ When the dowry had to be returned on the termination of the marriage, another provision of the same year, also included in the Code of Justinian, determined that the husband was obliged, within one year of termination of the marriage, to return to those who were beneficiaries under the law the things of which the dowry had consisted, whether mobile (*res mobiles vel se moventes*) or incorporeal (*res incorporales*). Otherwise, he would be obliged to pay interest at 4% per year.²⁴ Another special exception was established by Novel 120 of 544, which set a maximum of 3% on the interest rate for loans to churches and charitable foundations.²⁵

¹⁹ Novel 32, section 1: “if the things lent are nomismata, each nomisma shall bear 1 keration per year as a kind of interest” (εἰ δὲ νομίσματα τὰ δανεισθέντα εἴη, ἐφ’ ἐκάστῳ νομίσματι ἐνιαύσιον κεράτιον ἐν προφάσει τόκου). Novel 34 is addressed to the *praeses* of Haemimontus in Thrace, but it emerges from the text that it actually concerned “Mysia [= Moesia] secunda provincia.” Cf. Billeter, *Geschichte des Zinsfusses*, 339–40, who accepts that its applicability extended to the entire Byzantine state. Otherwise, see Kaser, *RPR*, 52, p. 342 n. 52.

²⁰ Billeter, *Geschichte des Zinsfusses*, 340–42; Cassimatis, *Intérêts*, 56–58.

²¹ See above, note 4.

²² *CI* 7.542, of the years 529 and 531. Cf. Cassimatis, *Intérêts*, 97: after the four months had elapsed, the interest became 12%.

²³ *CI* 5.12.31.5 and 6 of the year 530. Cf. Kaser, *RPR*, 187–88, 342 n. 52; Billeter, *Geschichte des Zinsfusses*, 346; Cassimatis, *Intérêts*, 96. For the fact that the 4% (= 4.2%) was a fixed rate, not a maximum, see Billeter, *op. cit.*, 346.

²⁴ *CI* 5.13.1.7b. Cf. Kaser, *RPR*, 192 n. 45, and 342 n. 52; Billeter, *Geschichte des Zinsfusses*, 346–47; Cassimatis, *Intérêts*, 96; J. Sontis, *Die Digestensumme des Anonymos* (Heidelberg, 1937), 1:96ff.

²⁵ Novel 120 (year 549), section 6: “As for the interest, not more than a fourth part of a hekatoste” (Τὰ δὲ εἰς τόκους οὐ πλείονας τοῦ τετάρτου μέρους τῆς ἑκατοστῆς). One-quarter of a hekatoste would be the monthly rate (Cassimatis, *Intérêts*, 59–60, Billeter, *Geschichte des Zinsfusses*, 343–44) and would correspond to 3% per year. In the event of *antichresis* (the substitution of usufruct for interest), any excess paid would be deducted from the principal (see Cassimatis, *op. cit.*, 60 n. 1, and Billeter, *op. cit.*, 343–44) until repayment, and after repayment it would be refunded.

Post-Justinianic Byzantine Law

The *Ecloga* of the Isaurian emperors makes absolutely no mention of interest, either on ordinary loans or on maritime loans.²⁶ We are informed that Nikephoros I (802–811) issued a provision—which has not survived—prohibiting the charging of interest altogether.²⁷ Since it is no longer possible to discover what the precise content of this prohibition may have been, much of what follows is hypothesis. From the scanty information that has survived, we learn that Nikephoros I granted maritime loans,²⁸ by way of exception, to the healthiest of the shipping firms of Constantinople; the loans were of a standard value of 12 litrai of gold (864 gold nomismata) at an interest rate of 16.66% or, as the sources have it, 4 keratia for each nomisma of gold,²⁹ although the enterprises receiving the loans were not, for this reason, to be released from their other tax obligations (“the usual *kommerkia*”). The surviving information does not allow us to conclude whether the ban on interest applied in general or was confined only to maritime loans, although the latter seems more reasonable. Nor do we know whether the prohibition also applied to shipowners who were not based in Constantinople or only to those whose headquarters were there but who could not be numbered among the most financially sound enterprises.

Various views have been advanced as to whether the measure introduced by Nikephoros I was compulsory or not and as to the purpose he may have been trying to achieve.³⁰ However this may be, the regulation of interest on maritime loans intro-

²⁶ L. Burgmann, ed., *Ecloga: Das Gesetzbuch Leons III. und Konstantios V.* (Frankfurt am Main, 1983), E.10.1; cf. Zachariae von Lingenthal, *Geschichte*, 312 n. 56, and 301; Cassimatis, *Intérêts*, 112–13. However, the wording of the *Ecloga*—“the debtor is not permitted to invoke an enemy raid or a shipwreck in order to postpone his debt to the creditor” (μη ἔχοντος ἄδειαν τοῦ δανεισαμένου ἐχθρικὴν ἐπιδρομὴν ἢ ναυάγιον θαλάσσης . . . πρὸς διαστροφὴν ἢ ἀναγωγὴν προτίθεσθαι τοῦ δανείσαντος)—was clearly composed in view of the terms of maritime loan contracts.

²⁷ Theophanes, *Chronographia*, ed. C. de Boor, 2 vols. (Leipzig, 1883–85; repr. Hildesheim, 1963), 488.11 (hereafter Theophanes) (= *Georgius Cedrenus*, ed. I. Bekker (Bonn, 1839), 2.39.10 (hereafter Kedrenos). On this question, see also Laiou, “Exchange and Trade,” 711.

²⁸ It is hard to understand Cassimatis’ view that this is not a maritime loan (“il ne s’agissait pas d’un prêt maritime,” *Intérêts*, 111 n. 2). In translating the texts of Theophanes and Kedrenos, Cassimatis himself rendered the phrase “τοκισμοὺς ἐν πλοίοις” as “des intérêts dans le prêt maritime” (p. 114).

²⁹ This is the “tenth vexation” of Nikephoros I, dating from 811, the last year of his reign. Cf. A. Christophilopoulou, “Ἡ οἰκονομικὴ καὶ δημοσιονομικὴ πολιτεία τοῦ Αὐτοκράτορος Νικηφόρου Α’” in *Ἀνάπτυξιν εἰς μνήμην Κ. Ι. Ἀμάντου* (Athens, 1960), 431 n. 2, referring to Theophanes, 488 = Kedrenos 2.39.8 (“in the ninth year”). According to Theophanes, 487.17–19 = Kedrenos, 2.38.13–15 (see also *Ioannis Zonarae epitome historiarum*, ed. M. Pinder and T. Büttner-Wobst (Bonn, 1841–97), 3:307.6–9), Nikephoros I “assembled the official *naulkeroi* of Constantinople and gave them each 12 litrai of gold at an interest rate of 4 keratia per nomisma, retaining the usual *kommerkia*” (τοὺς ἐν Κωνσταντινουπόλει ἐπισήμους ναυκλήρους συναγαγὼν, δέδωκεν ἐπὶ τόκῳ τετρακεράτῳ τὸ νόμισμα ἀνά χρυσίον λιτρῶν δώδεκα, τελούντας καὶ τὰ συνήθη κωμέρκια).

³⁰ H. Monnier (“L’Épibολή,” in *Études de droit byzantin* [London, 1974] = *Nouvelle revue historique du droit français et étranger* 19 [1895]: 87–89) thus argues that these were compulsory loans to the most important shipowners of Constantinople. See also idem, *Les Nouvelles de Léon le Sage* (Bordeaux–Paris, 1923), 148. However, on this question see also the justifiable objections of A. Christophilopoulou

duced by Nikephoros I was revoked very soon after his death, possibly as early as the reign of Michael I Rangabe (811–813).³¹

With the rise to power of the Macedonian dynasty, however, an express and general prohibition on the charging of interest was introduced. In the last year of his reign (885 or 886), Basil I, the founder of the Macedonian dynasty, issued a legislative text (and not, as was formerly believed, a draft law) called the *Eisagoge* (or *Epanagoge*)³² including a provision that forbade, in general, the receipt of interest by any persons except orphans and minors.³³

However, the economic situation generated pressure for recognition of the legality of interest, and Leo VI the Wise, successor to Basil I, was obliged to lift the ban on it that had been enforced by the *Eisagoge*. In his Novel 83, he recognized the weakness of human nature and the economic problems the prohibition on interest had created, allowing its payment once more at an annual rate of 4% (= 4.2%).³⁴

(“Οικονομική,” 428): “Such an offer [of compulsory loans] would be a unique phenomenon in world economic history.” Cf. also G. Cassimatis, “La dixième vexation de l’empereur Nicéphore,” *Byzantion* 7 (1931): 149–60; E. Francès, “L’empereur Nicéphore Ier et le commerce maritime byzantin,” *BSI* 27 (1966): 41–47.

The view of Christophilopoulou to the effect that this was actually a measure to benefit shipping (op. cit., 430, and eadem, *Βυζαντινή Ιστορία* [Athens, 1981], 2.1:171), while perfectly reasonable, does not provide a satisfactory explanation of why the measure was seen as a “vexation,” since if the loans granted at 16.66% interest were not compulsory, there was no reason why the interested parties should have accepted them.

³¹ Cassimatis, *Intérêts*, 118 n. 2. The author believes that no express abolition took place, but that in practice the collection of interest was tolerated once more. See also Monnier, “L’Επιβολή,” 89 n. 4.

³² Cf. Sp. Troianos, *Οἱ πηγές τοῦ βυζαντινοῦ δικαίου* (Athens, 1986), 100–105; P. Pieler (Papagianni and Troianos) “Νομική Φιλολογία,” in H. Hunger, *Βυζαντινὴ Λογοτεχνία* (Athens, 1994), 3:336–40 and n. 107, following the view of A. Schmink (*Studien zu mittelbyzantinischen Rechtsbüchern* [Frankfurt, 1986], 14–15, 62–65, 71–76) on the chronological relationship between the *Eisagoge* (*Epanagoge*) and the *Procheiros Nomos*. This text also adopts that view. For the view current in earlier literature that the *Procheiros Nomos* came first, see Zachariae von Lingenthal, *Geschichte*, 22; Cassimatis, *Intérêts*, 117; G. Petropoulos, *Ιστορία καὶ Εἰσηγήσεις τοῦ Ρωμαϊκοῦ Δικαίου*, 2d ed. (Athens, 1963), 256–57; H. J. Scheltema, “Byzantine Law,” in *Cambridge Medieval History*, ed. J. M. Hussey (Cambridge, 1967), 4.2:67; and, more recently, N. Van der Wal and J. H. A. Lekin, *Historiae Juris Graecoromani delineatio* (Groningen, 1985), 78–81, and Laiou, “Exchange and Trade,” 734–35.

³³ *Eisagoge* 28.2 (Zepos, *Jus*, 2:320–21): “and driving out the very name of usury from the city and having abolished interest, as said above, we only allow it to be paid to orphans and minors” (καὶ αὐτὸ τοῦ τόκου τὸ ὄνομα τῆς πολιτείας ἀπελαύνοντες . . . τοὺς μέντοι τόκους ὡς προεῖρηται περιελόντες ἐπὶ μόνων τῶν ὀρφανῶν καὶ ἀνηλίκων συγχωροῦμεν αὐτούς καταβάλλεσθαι). See Cassimatis, *Intérêts*, 117; Maridakis, *Ἀσπικόν*, 224. According to a scholion on this provision, interest was permitted but, whereas in all other cases it had to be specially agreed, where orphans and minors were involved it was always due, that is, whether or not a special agreement had been made (Maridakis, op. cit., 224 n. 7). As Cassimatis (op. cit., 117 n. 2) rightly points out, the scholiast of the *Eisagoge* presents his personal views on the question of interest as if they were provisions of legislation. According to the same scholiast, the interest involved in the case under examination is that at the rate of 12% per year (Cassimatis, op. cit., 117 n. 2).

³⁴ Leo’s Novel 83 (*Les Nouvelles de Léon VI le Sage*, ed. P. Noailles and A. Dain [Paris, 1944]). Of course, because the provision establishes a link with the nomisma and the keration, the interest rate is not literally 4% but 4.2%. See K. Pitsakis, *Κωνσταντίνου Ἀρμενοπούλου Πρόχειρον Νόμων ἢ Ἐξάβιβλος* (Athens, 1971), 203–4 n. 2.

Yet even this revocation of the ban failed to solve the problem, given that—perhaps under the influence of the church—Leo VI changed his mind again and in the *Procheiros Nomos*, issued in 907,³⁵ described the charging of interest as “unworthy of a Christian state” and banned it completely, without exceptions, laying down furthermore that any interest paid was to be applied to the principal of the debt.³⁶

This subsequent reintroduction of the ban on interest and, what is more, in a form still more extreme than that of the *Eisagoge*, abolished the regulations of Novel 83. Indeed, it is believed that the ban of the *Procheiros Nomos* is the reason why Harmenopoulos, when compiling his *Hexabiblos* 450 years later, states that the prohibition of interest was the work of Leo the Wise, completely overlooking the earlier Novel 83 of the same emperor.³⁷

However, in 928, only a few years after the *Procheiros Nomos*, a novel of Romanos I Lekapenos concerning the right of *protimesis* imposed “lawful interest”³⁸ upon those who delayed in their exercise of that right as something to be paid to the purchaser without the right of first refusal together with the sum he had paid and any expenses he might have incurred. This is an indirect indication that Romanos did not regard the charging of interest as in any way reprehensible.

In the eleventh century, information about the level of interest rates is to be found in two provisions of the *Peira* of Eustathios Rhomaios. One follows Justinianic law, whereas the text of the other contains a reference to the interest payable to orphans,³⁹

³⁵ For the fact that Novel 83 was earlier than the *Procheiros Nomos* 16.14, see Schminck, *Studien*, 81 and 89–90 n. 214; Pieler (Papagianni and Troianos), in Hunger, *Βυζαντινὴ Λογοτεχνία*, 3:343 n. 133. For the fact that the novels of Leo VI the Wise had been codified (probably in 892 but with 898 as a *terminus ante quem*), see Pieler (Papagianni and Troianos), *op. cit.*, 342 n. 121, and 343. In other words, the novels had been codified approximately ten years before the issuing of the *Procheiros Nomos*. For the dating of the *Procheiros Nomos* to 907, see Schminck, “Das Prooimion des Prochiron,” *Studien*, 91–102; Troianos, *Οἱ πηγές*, 103–5; Pieler (Papagianni and Troianos), *op. cit.*, 343–44 n. 134. See also N. Oikonomides, “Leo VI’s Legislation of 907 Forbidding Fourth Marriages,” *DOP* 30 (1976): 173–93. Cf., however, Laiou, “Exchange and Trade,” 734–35.

³⁶ *Procheiros Nomos* 16.14. It should be noted, however, that the *Eisagoge* (28.4, Zepos, *Jus*, 2:322) already contained this provision, which Zachariae von Lingenthal thought should be deleted (see Zepos, *Jus*, 2:322 n. 4; cf. Maridakis, *Ἀστικόν*, 224 n. 7; Cassimatis, *Intérêts*, p. 117 n. 2).

³⁷ Cf. *Hexabiblos* 3.7.24, where the section from the *Procheiros Nomos* is given under the heading “Novel of Emperor Leo prohibiting interest,” which, in the light of recent knowledge, should no longer be regarded as entirely inaccurate. See also note 56 below.

³⁸ See this provision by Romanos I Lekapenos in N. Svoronos, *Les Nouvelles des empereurs macédoniens concernant la terre et les stratiotes* (Athens, 1994), 1st version, 5, p. 66: “paying back to them the purchase price with the lawful interest and the necessary expenses” (ἀναπληροῦντες αὐτοῖς τὸ ἀνήκον τίμημα μετὰ τοῦ νομίμου τόκου καὶ τῶν ἀναγκαίων ἀναλωμάτων); 2d version, 5, p. 67. For the fact that the first version is the authentic text, see *ibid.*, 57. For the dating to 928 (and not 922), see *ibid.*, 33 and 59. The date of 922 was accepted by Zachariae von Lingenthal, *Geschichte*, 238, who was followed by, among others, Maridakis, *Ἀστικόν*, 224 n. 11, and Petropoulos, *Ἱστορία*, 262. See also the critique by L. Burgmann of the Svoronos edition in *Rechtshistorisches Journal* 13 (1995): 455–79.

³⁹ *Peira* 19.62, in Zepos, *Jus*, 4:80 and 69–70. However, it has been rightly observed that this rate of interest for orphans (*trientes usurae*) of 4% (= 4.2%) was provided for under Justinianic legislation for the *illustres* (later *protospatharioi*). Cf. *CI* 4.32.26.2; Zachariae von Lingenthal, *Geschichte*, 309; Cassimatis, *Intérêts*, 50 n. 3; and Laiou, “God and Mammon,” 279 n. 48.

one also encountered later, in the *Hexabiblos* of Harmenopoulos.⁴⁰ Before leaving the *Peira*, we should note an inaccuracy of G. Ostrogorsky's, to which A. E. Laiou has drawn attention. The point in question is the calculation of interest with reference to the *nomisma*, on the one hand, and the year, on the other. Correctly calculated, the *besses centesimae usurae* amounted to 11.11%. Although Ostrogorsky initially accepted this figure, he later seems to have calculated the rate as 11.71%, which Laiou correctly considers erroneous. However, the difference may be no more than a printer's error.⁴¹

The problem of interest was dealt with by the three greatest interpreters of Byzantine canon law—John Zonaras, Alexios Aristenos, and Theodore Balsamon—who were active principally in the twelfth century.⁴² However, the prohibition of interest that they advocated referred only to the clergy and differed from the corresponding views of the Christian West in having much narrower applicability.⁴³

The situation outlined above did not alter over the period from the early thirteenth century to the ultimate fall of Byzantium in 1453. Where maritime loans were concerned, a notarial instrument referring to such a loan and drawn up in Constantinople in 1363 or 1364 sets the interest rate at 16.66% per voyage (the debtor was to repay 14 hyperpyra against the 12 he had received as a loan).⁴⁴

It is interesting, in this context, to note that no mention whatever is made of interest in maritime loans from Chandax in which one or both of the contracting parties was Greek, such as the contract of 25 August 1352.⁴⁵ This would seem to indicate that fear

⁴⁰ *Hexabiblos* 3.7.10: "that the interest to orphans is a third of the *hekatoste*, that is, 4 *nomismata*" (ὅτι ὁ ὀρφανικός τόκος ἀπὸ τρίτης ἐκατοστῆς ἐστίν, ἥγουν νομίσματα δ'). Cf., however, *Hexabiblos* 3.7.23, where there is no mention of "interest to orphans." For the position of the *Eisagoge* on the same matter, see note 33 above.

⁴¹ Zachariae von Lingenthal, *Geschichte*, 311; G. Ostrogorsky, "Löhne und Preise," *BZ* 32 (1932): 308 n. 3; G. Ostrogorsky, *Histoire de l'état byzantin* (Paris, 1956), 219 n. 1. The figure of 11.71% is also used by N. Oikonomides, *Hommes d'affaires grecs et latins à Constantinople, XIIIe–XVe siècles* (Montreal, 1979), 55 n. 55. See Laiou, "God and Mammon," 279 n. 48.

⁴² For these three canonists, see Troianos, *Oi πηγές*, 146–51.

⁴³ See Laiou, "God and Mammon," 261–96 *passim*, but in particular 295–96, where attention is drawn to the efforts made by Patriarch Loukas Chrysoberges and Emperor Manuel I Komnenos to establish clear dividing lines between the clergy, on the one hand, and on the other merchants, bankers, and those practicing other professions, even on a freelance basis, such as doctors.

⁴⁴ Cf. Oikonomides, *Hommes d'affaires*, 59 n. 69; D. Gofas, "Θαλασσοδάνεια, Σερμαγιές, Βλησίδια," in *Ἀνάλεκτα Ναυτικού Δικαίου* 1 (1988), 290 n. 12 = *Μελέτες*, 397 n. 12, with references. See also note 53 below.

⁴⁵ A. Lombardo, *Zacharia de Fredo, Notario in Candia (1352–1357)* (Venice, 1968), no. 40 (25 August 1352): a maritime loan granted by John Kornaropoulos, resident of the *Burgo* of Chandax, to George Simenakes, son of the late Emmanuel Simenakes, and Michaletos Veryvos, son of the late Nicholas Veryvos, known as Sympragos, both residents of Chandax. The loan amounts to 52 hyperpyra "in circulation in Crete" (for this concept, the first reference that springs to mind is D. Gofas, "Ένας πρόδρομος τῆς συναλλαγματικῆς, ἐκδομένος ἀπὸ Ἑλλῆνα ἔμπορο τὸ 1300," in *Μελέτες*, 285 n. 18 = "Un précurseur de la lettre de change émis par un commerçant grec en 1300," in *Estudios de historia del derecho europeo: Homenaje al Profesor G. Martínez Díez* (Madrid, 1994), 1:301 n. 18). For another maritime loan, to the same George Simenakes, with his mother-in-law Eudocia, widow of George Tourkopoulos, as guarantor (*plecia*), granted by the Venetian (?) lady Marina Caravello, for 33 Cretan hyperpyra (balance and supplement of an earlier debt by Simenakes, of 17 September 1351, in the same

of the Catholic church made the Greeks wary of what they put down in writing on such matters, especially when the notary they used was a Venetian and when they operated within parts of the former Byzantine world that were under Venetian rule.

A short treatise by Nicholas Kabasilas “On Usury” addressed to Empress Anna of Savoy, the mother of John V Palaiologos, dating from approximately the same period, that of the civil war between John V and John Kantakouzenos, has survived.⁴⁶ In this treatise, probably written around 1347,⁴⁷ Kabasilas describes the appalling state of poverty afflicting the inhabitants of the last surviving lands of what had once been the powerful Byzantine Empire and proposes to the empress that interest, which by a rather tenuous line of argument he regards as tantamount to a deposit (*parakata-theke*),⁴⁸ should be deducted from the total sum owed. Indeed, Kabasilas suggests that debtors who found themselves in such difficult circumstances might even be released from the obligation to repay the principal of the loan,⁴⁹ invoking a circumstantial and forgotten piece of legislation introduced by Emperor Andronikos III Palaiologos (1321–28), husband of Anna of Savoy, and recommending that it be revived. The treatise gives no indication of the level of interest on the claims to which Kabasilas refers, but the state of impoverishment to which the debtors had been reduced would seem to suggest that rates were well above the permitted maximum.

However, evidence of the level of interest on ordinary loans is to be found in two decisions issued by the patriarchal court of Constantinople in the early fifteenth century. In the first, issued under Patriarch Matthew I (1397–1410) in 1400, the debt bore interest at 15%, that is, 45 hyperpyra for one year on a principal of 300 hyperpyra.⁵⁰ In the second, issued in 1399 just a few months before the first, the interest was 3 hyperpyra on a principal of 27 for five months, that is, 26.6%. The second instance may well have been one of usury.⁵¹

As for the absence of any mention of the level of the rate of interest in the case of a maritime loan judged by the patriarchal court,⁵² this should, I believe, be sought in the reasons explaining the similar phenomena in the maritime loan contracts drawn

currency, for 40 Cretan hyperpyra), see Lombardo, *Fredo*, no. 42 (26 August 1352). In neither case is any mention made of interest.

⁴⁶ R. Guiland, “Le traité inédit ‘Sur l’usure’ de Nicolas Cabasilas,” in *Eis Mnḗmyn Spyrídonos Láμπrou* (Athens, 1935), 269–73 and 274–77 (text).

⁴⁷ See Guiland, “Cabasilas,” 263–71, with a summary of the contents of the treatise. For the date, in particular, see 272.

⁴⁸ Cf. *ibid.*, 275, lines 25–40 of the treatise by Kabasilas.

⁴⁹ *Ibid.*, 373.

⁵⁰ MM 2: no. 568, pp. 380–81 (= *Les registres des actes du patriarchat de Constantinople*, ed. V. Grumel, V. Laurent, J. Darrouzès, 2 vols. in 8 pts. (Paris, 1932–79), 1.6: no. 3125. Cf. N. Matsis, “Ο τόκος ἐν τῇ νομολογίᾳ τοῦ Πατριαρχείου Κωνσταντινουπόλεως κατὰ τοὺς ΙΔ’ καὶ ΙΕ’ αἰῶνας,” *ΕΕΒΣ* 38 (1971): 83; E. Papagianni, Ἡ νομολογία τῶν ἐκκλησιαστικῶν δικαστηρίων τῆς βυζαντινῆς καὶ μεταβυζαντινῆς περιόδου σὲ θέματα περιουσιακοῦ δικαίου (Athens, 1992), 1:48 nn. 31–32, and 97 n. 6.

⁵¹ MM 2: no. 530, pp. 313–14 (= *Regestes*, 1.6: no. 3080). Cf. Matsis, “Τόκος,” 83; Papagianni, *Νομολογία*, 48 nn. 30 and 33.

⁵² MM 2: no. 680, p. 560, of the year 1401.

up by Greeks in the Venetian-ruled areas: given that vessels very often called at Venetian-controlled ports, the contracting parties would avoid mentioning forbidden interest so as to protect themselves against the intervention of the Catholic church or of the Venetian authorities acting under pressure from it.⁵³

I conclude this discussion with a brief mention of the two principal compendia of Byzantine law produced during the fourteenth century: the *Syntagma* of Matthew Blastares (1335)⁵⁴ and the *Hexabiblos* of Constantine Harmenopoulos (1345). As has been demonstrated by Spyros Troianos, the direct source of the provisions of the former work that are of interest here is the Code of Justinian.⁵⁵ In the case of the *Hexabiblos* of Harmenopoulos, it is interesting to note that one provision, reproducing the *Procheiros Nomos* verbatim, describes interest as having been abolished in its entirety,⁵⁶ while others, following the *Basilics* and the legislation of Justinian, accept it and set the permissible rates.⁵⁷

⁵³ Cf. Gofas, “Ἐμπορικές ἐπιχειρήσεις Ἑλλήνων τῆς Κρήτης γύρω στό 1300,” in *Μελέτες*, 258–60. By way of contrast, in the Byzantine maritime loan of 1363 or 1364 from Constantinople, interest is specifically mentioned: 14 “nomismata” (i.e., hyperpyra) were to be repaid on a maritime loan of 12 “nomismata.” This interest of 2 nomismata was agreed for a single voyage and not by the year. The maritime interest for this voyage was thus 16.66%.

⁵⁴ Troianos, *Οἱ πηγές*, 166.

⁵⁵ Sp. Troianos, “Περὶ τὰς νομικὰς πηγὰς τοῦ Ματθαίου Βλαστάρη,” *ΕΕΒΣ* 44 (1979–80): 321. More specifically, the source for T7 475.26–476.12 is *CI* 4.32.26 (cf. also *Bas.* 23.3.74), while for T7 476/16–18, the source is *CI* 4.32.26.4.

⁵⁶ Heading to book 3, title 7.24 (“concerning interest”) of the *Hexabiblos* (cf. above, note 37). See also Pitsakis, *Ἑξάβιβλος*, 203–4 n. 2. However, recent findings would seem to justify the heading, which Pitsakis, *ibid.*, describes as “inaccurate.”

⁵⁷ E.g., *Hexabiblos*, book 3, title 7, paras. 10, 18, 21–22 and, in particular, 243. For the question of this deliberate contradiction, see Pitsakis, *Ἑξάβιβλος*, 203–4 n. 1.

Legal Aspects of the Financing of Trade

Olga Maridaki-Karatza

An investigation of how trade was financed during the Byzantine period must involve a survey of all the legal institutions relevant to the accumulation or acquisition of money for commercial or productive purposes. The reasons for this are the following: first, the absence of any rules by which certain transactions could be described as commercial, by which persons engaging by profession in such transactions could be classed as merchants, and by which consequences were established for engaging in trade. In other words, there was no commercial law to govern all trading activities. Second, there were no properly organized credit or financial agencies that provided systematic, rather than circumstantial, financing for commercial or productive activities. The only relevant guild mentioned in the *Book of the Eparch* is the guild of bankers, probably money changers, as can be deduced from the provisions concerning them, which principally refer to the genuineness of the coinage and the organization of the profession. References to money changers (*argyropratai*) are, unfortunately, rare and occur only on the occasion of some special arrangements for them within the context of the more general regulation of some institution. They allow us to conclude, tentatively, that the members of this class may have been at an initial stage in the development of banking in the sense that they systematically financed entrepreneurial activities.¹

Finally, there is a scarcity of source material in the form of documents connected with transactions and contracts for financing commercial or productive activities. This is not surprising: many such contracts are never put in written form, and even when a document has been drawn up for the purpose of concluding or evidencing a transaction, it is only natural that it should be destroyed after the transaction has been completed, whether successfully or not. Nor was it common for an everyday transaction to be considered important enough for inclusion in a chronicle, far less in a more ambitious work of historiography.

In the late Byzantine period (from the 13th century to the demise of the empire),

This chapter was translated by John Solman.

¹ See also G. Dagron, "The Urban Economy: Seventh–Twelfth Centuries," K.-P. Matschke, "The Late Byzantine Urban Economy: Thirteenth–Fifteenth Centuries," and C. Morrisson, "Byzantine Money: Its Production and Circulation," *EHB*.

trade grew under the influence of the merchants of Genoa and Venice. At this time, documents began to make their appearance; most of them are promissory notes, but the archives of the notaries of Crete have also preserved some notarial instruments.

In view of this, one clearly needs to turn to the rules of civil law and, through certain institutions, to identify, classify, and construe those rules so as to produce as full a picture as possible of the framework within which entrepreneurial activity must have developed and been financed and the rules to which it was subject. This framework, within which the parties operated and engaged in legal acts, was broad and flexible since Byzantine law observed the principle of consensual contracts, permitting the parties to be bound by a mere formless agreement in accordance with the requirements of the transaction, though of course always within the framework of the law: “the agreements of those lawfully engaging in transactions, in all ways, shall be valid.”² However, since we have no written source material relevant to transactions, we lack a vivid picture of entrepreneurial life.

This chapter deals only with the financing of trade as an entrepreneurial activity in the contemporary sense and not with the other forms of trade—usually circumstantial in nature—in which public officials engaged, supplying it with commodities that had come into their hands precisely as a result of their office.³

The basic legal institutions under civil law relevant to the financing of entrepreneurial activities are loans and partnerships/companies. In the special case of maritime trade, maritime loans and shared debt partnerships (χρεωκοινωνία) are relevant. The basic source for investigating these institutions is the *Basilics*, in parallel to which certain earlier and later collections of laws (the *Ecloga*, the *Procheiros Nomos*, the *Synopsis Maior*, the *Hexabiblos*, and the *Rhodian Sea Law*) have also been used here. Compendia of court practices such as the *Peira* of Eustathios Rhomaïos and, for the last centuries of Byzantium, the proceedings of the synodal court are also useful as source material.

No change in philosophy or the basic regulations can be observed in the later legislative instruments or the compendia, but the collections of court practices, in particular, are of interest because the immediacy with which they are worded gives a vivid picture of the social and economic conditions of the period, as well as of the need for law to adjust to those developments.

Loans

The principal financing institution involving credit was the loan. Loans served a variety of purposes, just as they do today: personal needs that have nothing to do with the debtor's entrepreneurial activities, as well as the borrower's business requirements. In the Byzantine period, the provisions of law drew no distinction between these two categories of loan, and the same regulations were applied to both. The sources only very occasionally refer to entrepreneurial loans—just as, indeed, there are very few

² Αἱ γὰρ βουλῆσεις τῶν νομίμως συναλλασσόντων παντὶ τρόπῳ δεκταὶ εἰσι.” *Bas.* 12.1.88.

³ See A. E. Laiou, “Economic and Noneconomic Exchange,” *EHB*.

mentions of entrepreneurs in the legal sources. However, such references as there are, when taken in conjunction with the provisions regulating more specific matters, allow one to hypothesize that the loan was an institution in business activity, and especially in trade, though certainly not the only one. Where the development of entrepreneurial activity was concerned, a loan was thus the simplest manner of shifting money on a temporary basis from those who had saved or accumulated it to those who were developing entrepreneurial activities.

Because of its importance for transactions, for the circulation of money (given that loans principally involve money), and thus for the economy, the loan fell within the scope of the law, which regulated it. Loans were one of the fundamental legal institutions of Roman and later of Byzantine law, the philosophy and basic principles of which remain unchanged to the present day.

The *Basilics* is the basic source for research into the institution of the loan. Book 23 is central, but provisions applicable to loans are also to be found in books 12, 9, and 24. The *Procheiros Nomos* includes provisions regulating loans (title 11), as do the later legal compilations based on the *Basilics*: the *Synopsis Maior* (section 10, title 6) and the *Hexabiblos* of Harmenopoulos (book 3, title 5, and book 2, title 2).

Judicial practices connected with loans are dealt with in title 26 of the *Peira* of Eustathios Rhomaïos, and information about the same subject in the last centuries of Byzantium is also to be found in the compendium of decisions of the synodal court.⁴

The legislator's central concerns in regulating the institution of the loan were, on the one hand, to protect the creditor so as not to discourage the lending of money and thus the channeling of money into the process of production and commerce (protection, however, that could not and did not extend to removal of the risk of his losing his money, which was inherent in the contract of loan) and, on the other, to protect the debtor against excessive commitment to the creditor. Unless checks and balances were imposed, this might lead to the loss even of the debtor's personal freedom or that of his family, which was prohibited ("if the creditor takes as security the children of the debtors and employs them in his service, he shall lose his rights to the loan and pay as much again to the child who has been held or to his parents,"⁵ and "destitute debtors shall not be compelled to serve those to whom they owe money").⁶ The purpose of this prohibition was that debtors should not be discouraged from concluding the loans they required to obtain the funds for their industrial activities.

Loans were concluded by contract, that is, by agreement between the two parties

⁴ *Synopsis Maior*, Zepos, *Jus*, vol. 5; *Peira*, Zepos, *Jus*, vol. 4. For decisions of the synodal court: MM, vols. 1 and 2.

⁵ Ὁ δανειστής ἐὰν ἐνέχυρα λάβῃ καὶ ἐπάρῃ τὰ τέκνα τῶν ιδίων χρεωστῶν ἢ εἰς δουλικὴν ὑπηρεσίαν ταῦτα μισθώσῃται, ἐκπιπτέτω τοῦ χρέους καὶ ἄλλην τοσαύτην ποσότητα τῷ κρατηθέντι ἢ καὶ τοῖς τοῦτου γονεῦσι καταβαλλέτω: *Ecloga* 10.2 (L. Burgmann, ed., *Ecloga: Das Gesetzbuch Leons III. und Konstantios V* (Frankfurt am Main, 1983), *Hexabiblos* 3.5.66 (K. Pitsakis, Κωνσταντίνου Ἀρμενοπούλου Πρόχειρον Νόμων ἢ Ἑξάβιβλος (Athens, 1971).

⁶ Οὐκ ἀναγκάζονται οἱ ἄποροι χρεῶσται δουλεύειν τοῖς ἰδίοις δανεισταῖς: *Bas.* 24.3.16; *Hexabiblos* 3.5.65; *Syn. Maior* X.2.29.

that by the loan the ownership (“a loan transfers the ownership”)⁷ of money or other replaceable things was delivered from one of the contracting parties to the other (“a loan consists of things that can be measured, numbered, and counted,”⁸ and “pieces of money or any other thing to be found on the earth or in the sea may be lent”).⁹ The debtor was obliged to return to the creditor things of the same quantity and quality (“A person does not lend with the intention of receiving exactly the same thing,” and “that which has been given must be replaced by things of the same kind and quality”).¹⁰

To use the legal terminology still applied today, the loan contract is concluded *in re* (i.e., with the delivery of ownership of the thing to the debtor) and is formless (i.e., it is not subject to any particular formalities and need not be put in writing). Many loans were contracted entirely circumstantially, for example, during the course of fairs, so as to allow the merchant to buy the goods he needed, with repayment taking place at the end of the fair. Such is the case dealt with by Eustathios Rhomaïos, who gives a graphic description of the merchant’s attempts to obtain, by borrowing, the money he needed to trade at the fair.¹¹ However, if the contracting parties did draw up a written contract, then we need to distinguish between instances in which an undertaking was made to contract a loan in the future and those in which the instrument was drawn up to facilitate the proof of the loan. Here it should be noted that when the loan was for a large sum (in excess of 50 litrai of gold), any contract drawn up had to be signed in the presence of three witnesses; otherwise, the contract did not constitute proof and could not be invoked by the creditor.¹²

Operation of the Loan

The operation of the loan consisted of its use by the debtor for the entire period agreed upon and its repayment to the creditor.¹³ If no date of repayment was agreed on, the creditor was entitled to demand repayment at any time.¹⁴ If the debtor failed to repay the loan, the creditor had a clear case for bringing an action of *condictio certae creditae pecuniae* (which in the Greek-language legal texts of the period was rendered in Hellenized form as *kerton kondiktion* rather than being translated), demanding that the loan be repaid.

When the hearing began, the burden of proof was on the creditor to show “the counting out of the money,” that is, that possession of the money had been made over to the debtor and the loan concluded, while the debtor, in his defense, might contend

⁷ Τὸ δάνειον μετατίθησι τὴν δεσποτείαν: *Bas.* 23.1.2.

⁸ Τὸ δάνειον ἐν τοῖς σταθμουμένοις, ἀριθμουμένοις, μετρουμένοις συνίσταται: *Bas.* 23.1.2 and 1.

⁹ Ἐάν τις λογάριον ἢ ἀργύριον ἢ καὶ ἕτερον τι εἶδος τὸ οἰονοῦν ἐν τῇ γῇ ἢ καὶ ἐν τῇ θαλάσσῃ, δανείσῃται: *Ecloga* 10.1.1.

¹⁰ Δανείζει τις οὐκ ἐπὶ τῷ λαβεῖν τὸ αὐτό: *Bas.* 23.1.2, and τὸ δοθὲν ἀποδοθῆναι τοῦ αὐτοῦ γένους καὶ τῆς αὐτῆς καλλοπῆς, *Bas.* 23.1.3.

¹¹ *Peira* 26.1.

¹² *Bas.* 23.1.63 (Ὁ χειρογραφῆσας ὡς ἐπὶ μέλλοντι δανείω), and 23.1.61.

¹³ *Bas.* 23.1.2.

¹⁴ *Bas.* 26.5.94.

that the money had never been paid (“counted out”) to him, that a smaller sum had been paid and that this was the sum due (“Not only he who has received none of the things attested to shall be able to plead failure to make the loan, but also he who has agreed to more than he received,” and “the person receiving less and having agreed to more”), or that he had already repaid the loan.¹⁵

If a debtor made such objections, he could prove them by witnesses even if a written instrument had been drawn up. The written instrument became full proof after two years had elapsed from the conclusion of the loan, and in this case the debtor was no longer entitled to lodge any objections.¹⁶ However, certain exceptions were established so as to prevent the implementation of this provision from causing injustice. If the debtor had repaid the loan but the creditor, invoking an instrument drawn up more than two years previously, demanded that it be repaid again, it was possible (so as to protect debtors from those who lent money in bad faith) for the debtor to lodge an objection and prove that he had repaid the loan (although five witnesses were required for this) even though the two years had elapsed and the instrument was now full proof.¹⁷ The legislation itself explains why this regulation was necessary: “there is a great difference between the person who says ‘I prove that I paid’ and the person who says ‘prove that you counted it out.’”¹⁸ If the debtor contended falsely that the instrument was not genuine and it later proved to be authentic, then this borrower in bad faith would be sentenced to repay a sum double that of the loan.¹⁹ In both cases, the legislator’s clear intention is to protect the contracting parties against bad faith.

However, misbehavior in a debtor was not simply a matter of failure to repay a loan. The debtor could also be in arrears, if he failed to repay the loan on the date agreed. In cases of arrears, the debtor would be obliged to pay arrears interest, that is, an increment in addition to the rate agreed if the loan bore interest. This interest would vary according to the practice of the specific location, but it could not amount to a sum greater than double the loan (“when the principal of the loan has been doubled by interest, the interest shall cease to be charged”).²⁰

Satisfaction of the Creditor and Performance by the Debtor

Satisfaction of the creditor occurred, first and foremost, with the repayment to him, in accordance with his terms, of the sum of the loan by the debtor. If the debtor was

¹⁵ *Bas.* 23.1.62 (Ἀρίθμησιν τῶν χρημάτων); *Bas.* 23.1.64 and *Hexabiblos* 2.2.2 (Οὐ μόνον ὁ μηδὲν λαβὼν ἐξ ὧν ἐχειρογράφησεν ἀντιτήθῃσιν ἀναγκυρίαν ἀλλὰ καὶ ὁ πλείονα ὧν ἔλαβε χειρογραφήσας); *Bas.* 23.1.71 (Ὁ ἐλάττονα λαβὼν καὶ εἰς πλείονα χειρογραφήσας).

¹⁶ *Bas.* 23.1.72 and *Hexabiblos* 2.2.4.

¹⁷ *Hexabiblos* 3.5.82 and *Peira* 26.6.

¹⁸ Πολλὴ γὰρ ἡ διαφορὰ τοῦ λέγοντος ἀποδείκνυμι ὅτι κατέβαλον καὶ τοῦ λέγοντας ἀπόδειξον ὅτι ἡρίθμησας; *Bas.* 23.1.72.

¹⁹ *Bas.* 23.1.62.

²⁰ Τῶν τόκων τὸ κεφάλαιον διπλασιαζόντων ὁ τόκος παύεται: *Hexabiblos* 3.7.5, *Bas.* 23.1.42, 23.3.9, and 23.3.78. For interest in general, see D. Gofas, “The Byzantine Law of Interest,” and A. E. Laiou, “Economic Thought and Ideology,” *EHB*.

recalcitrant and failed to repay the loan, then the creditor, having had recourse to the courts and having had the sum awarded to him, could, in execution of the award, distrain upon the assets of the debtor to obtain satisfaction. He would distrain first upon the movable assets of the debtor and, if these were insufficient, upon his immovable property. If the creditor succeeded in obtaining the repayment of his loan, he took precedence even over those who had prior claims, since “the law is for the vigilant, not for those who are deeply asleep,” and “better is he who comes first.”²¹

Some of the more particular provisions regulating instances concerning the more highly organized and systematic financing of entrepreneurial activities are of interest for this investigation of the financing of trade. Such provisions include those that regulate the privileges of creditors (when the loans concern commercial transactions) or creditors who present themselves as financiers by profession.

A provision in the *Peira* (26.1), repeated in the *Hexabiblos* (3.5.37), concerns a loan granted to a person to enable him to trade at a fair (Ἐπὶ τῷ ἐξελεθῆναι καὶ πραγματεύεσθαι εἰς τήνδε τὴν πανήγυριν). If this debtor dies and other creditors make their appearance, then the creditor who lent the late debtor money to trade would enjoy a lien on the things bought at the fair (εἰς τὸν ἀγορασθέντα ἀπὸ τῆς πανηγύρεως φόρτον) as having lent the money for that purpose (ὡς ἐπὶ τοῦτω δανείσας).

Another provision to be found in the *Peira* (19.6) concerns a preference on a loan granted, against security provided by the debtor, to a quarrying enterprise: “I lent money to a marble merchant (?) against a mortgage on the stone. . . . This same debtor having leased imperial warehouses and fallen into debt, I have a lien” (Ἐδάνεισα μαρμαρίῳ ἐπὶ ὑποθήκῃ τῶν λίθων . . . ὁ δὲ αὐτὸς χρεώστης μισθωσάμενος ὥρεϊα βασιλικά ἐχρεώστησεν, ἐγὼ προτιμῶμαι).

Evidence of the existence of persons who, by profession, financed entrepreneurial or commercial activities is to be found in the provision of Justinian’s Novel 136 (included in the *Basilics*)²² under which only moneylenders (*argyropratai*) could validly grant guarantees as first debtors. This meant that, by way of exception, when the loan granted had been guaranteed by a moneylender, the creditor was not obliged to address himself first to the debtor, but might address himself directly to the moneylender and demand satisfaction from him. The exception introduced by this provision deprived moneylenders of the protection generally afforded to guarantors, preventing them from rebuffing the creditor and directing him to address himself first to the debtor and only to approach them, as guarantors, if he failed to gain satisfaction. It can be deduced from this exception that moneylenders were individuals who engaged in transactions and their financing on a professional basis and would thus be aware of the risks involved in guarantees; since their purpose in undertaking such risks was to make a profit, they had no need of the protection of the law.

However, the most important provisions that lead us to the belief that throughout

²¹ *Peira* 6.14; *Hexabiblos* 3.5.40: Οἱ γὰρ νόμοι τῶν ἀγρυπνοῦντων εἰσὶν, ἀλλ’ οὐχὶ τῶν βαρέως κοιμωμένων; *Bas.* 9.3.19, *Syn. Maior* X.2.3: Καλλίων ἔσται ὁ προλαβών.

²² *Bas.* 23.4.1.

the Byzantine period there was systematic financing of persons engaged in commercial or entrepreneurial activities are those concerning *ekstasis hyparchonton* and the provisions of the *Peira* that deal with fraudulent bankruptcy. Under these provisions, if a debtor's assets were insufficient to satisfy all his creditors, then he could concede all his assets to them, making a composition or *cessio bonorum* under which they would receive satisfaction from the sale (*diaprosis*) of the assets. In this way, the debtor would be discharged even if his assets had not been sufficient to satisfy all the creditors, who would receive satisfaction proportionally. After the sale of his assets and the partial satisfaction of the creditors, the debtor was free to acquire limited assets once more ("to obtain moderate property").²³ However, "If the debtor has not been subject to *ekstasis*, he shall be liable and answerable to claims until he has repaid everything." If once more he acquired large assets, "in his renewed prosperity, he shall be liable to his creditors once more."²⁴ This is an institution similar to modern-day bankruptcy under commercial law; under Byzantine law, however, there were no provisions specially applicable to merchants, commercial law did not exist, and the provisions were applied indiscriminately. However, by their very nature these provisions imply the existence of a number of creditors, successive sums in loans, and activity even after the composition which could produce new assets, and thus these are entrepreneurial loans, not loans to meet urgent but temporary personal needs on the part of the borrower.

Maritime Loans

The financing of maritime trade was based on the institution of the maritime or bottomry loan, which predominated throughout the Byzantine period. To begin with, as a *foenus nauticum* or *pecunia traiectitia*, it was regulated by the legislation of Justinian; later, it was governed by the *Rhodian Sea Law*, in which it is referred to as "money lent on the sea."²⁵

These regulations for maritime loans were continued almost unaltered by the *Basilics*, the *Synopsis Maior*, and Harmenopoulos, who refers expressly to the *Rhodian Sea Law*: "all maritime affairs and matters of the sea shall be subject to the law of the Rhodians."²⁶ However, the provisions do not amount to an overall arrangement, and of necessity the general provisions regulating loans would have had to be implemented as a complement.

The principal characteristic of the maritime loan was that the lender undertook the maritime risk; in other words, if the voyage for which the loan was concluded did not turn out well and the vessel with the merchandise failed to return, he was not entitled to address himself to the debtor and demand the discharge of his obligations from the

²³ *Bas.* 9.5.6: Μέτρια κτησάμενος; *Syn. Maior* X.2.5.

²⁴ Ὁ μὴ ὑποστὰς ἐκστάσιον χρεώστης, ἕως τὸ πᾶν ἀποδῶ, ἐνέχεται καὶ ἀπαιτεῖται; "Καὶ πάλιν εὐπορὸν ἐνέχεται τοῖς δανεισταῖς": *Peira* 26.13.

²⁵ Ἐπιπόντια χρήματα ἐκδανεισθέντα: *Rhodian Sea Law* 3.1.

²⁶ Τὰ ναυτικὰ πάντα καὶ ὅσα κατὰ θάλασσαν κρίνεται Ροδίῳ τέμνεται νόμῳ: *Hexabiblos* 2.11.1; cf. *Bas.* 5.3, appendix, and *Syn. Maior* N.1.1–34.

rest of his assets. “Maritime money is that which goes beyond the sea, not that spent on the spot and the things bought with it, if the sailing is at the risk of the creditor.”²⁷ Unlike ordinary loans, the money lent in these cases was not “safely on land” but, under the *Rhodian Sea Law*, “it should not be treated as a land loan,” explaining why the rate of interest on maritime loans was always higher than that on ordinary loans.²⁸

Partnerships

The financing of trade and, in particular, of entrepreneurial activities was achieved with the accumulation of capital in the form of partnerships. Partnerships were regulated and, like loans, constituted an institution in Roman and then Byzantine law. However, although like the loan it was an institution under civil law, the partnership was throughout the Byzantine period the predominant and most appropriate means for financing and developing commercial and entrepreneurial activities in instances where it was necessary for two or more persons to join forces in collaboration and for capital to be assembled. It was put into effect with contributions of money and also of personal labor. The partnership was not a relationship among persons with opposing interests, but a relationship of collaboration intended to optimize the achievement of a common purpose. The provisions governing and regulating partnerships are to be found in the sources along with the provisions that govern ownership. Indeed, the term *koinonia* is used indiscriminately in the sources to define co-ownership and also partnership.

The partnership or company of Byzantine law differed little from the partnership of modern times. The philosophy remains the same: the partnership was a contractual bond of a personal nature par excellence, one in which there were coinciding rather than opposing interests in the achievement of a shared entrepreneurial objective and, of course, the purpose was to benefit the members, usually in the form of profit. The legislator’s main concerns were, on the one hand, to regulate the relationships (rights and obligations) of the partners so as to ensure that the partnership functioned smoothly and without impediment in achieving its economic objectives and, on the other, to determine the responsibilities of the partners or company members toward others in order to protect those who transacted with it.

Formation

The partnership (*koinonia* in the Byzantine texts) was set up by a formless contract, that is, with the mere consent of the contracting parties and with their will to form a partnership (*affectio societatis*). Indeed, it was this will that distinguished the partnership from mere common ownership (*koinopraxis* in the Byzantine texts). It was laid down by the legislative instruments that “A partnership is set up in deed and in word and by

²⁷ Διαπόντια χρήματα εἰσὶ τὰ πέραν τῆς θαλάσσης ἀπιόντα, οὐ μὴν τὰ ἐπὶ τόπου δαπανώμενα καὶ τὰ ἐξ αὐτῶν ἀγοραζόμενα, ἐάν κινδύνῳ τοῦ δανειστοῦ πλέωσιν: *Syn. Maior* X.2.73.

²⁸ Ἐγγαία καὶ ἀκίνδυνα; Ἐγγαία μὴ χρηέσθωσαν; *Rhodian Sea Law* 2.16; cf. Gofas, “The Byzantine Law of Interest,” *EHB*.

notification,”²⁹ and that “A partnership may be set up in writing or otherwise.”³⁰ The need for the existence of consent and a common will to form the partnership emerges from the following express provision: “When a *koinonia* is set up by consent, then an action concerning a partnership can be brought, whereas when (an association) is formed without consent it is a *koinopraxia*”).³¹

Throughout the period in which Byzantine law was in force, and, indeed, for much longer, the partnership was a form of contract that generated rights and obligations on the part of the contracting parties (the partners) toward third parties but did not itself acquire a legal personality. In other words, the partnership never became a vehicle for rights and obligations, and as a result the personal liability of the partners toward third parties on behalf of the partnership was unrestricted. This should not strike us as in any way strange, since it was not until the nineteenth century, under the pressure of the vast expansion in trade at that time and in order to meet the new commercial needs, that companies acquired distinct legal personalities.

Duration of the Partnership

The duration of the partnership differed according to circumstances, in accordance with the will of the partners, with the purpose of the partnership, with the activities in which it was to engage, and with certain other conditions. It might be agreed that the duration of the partnership was to be “indefinite, that is, as long as they [the partners] shall live,” of a specific period, as of a certain time, or when certain conditions were fulfilled.³²

Since, as we have seen, the formation of the partnership was formless, it might be set up purely circumstantially in the market or at a fair by merchants trading there so as to allow them to assemble the money they needed for their commercial activities. Naturally enough, such partnerships would have a very limited duration, usually no longer than that of the fair or market.

However, the duration of the partnership did not depend only on the agreement reached by the partners. It could also be terminated when other events supervened, regardless of the will of the partners. “The partnership shall be dissolved on the demise of the persons or the thing”; the text itself clarifies demise (*phthora*) as the death or legal incapacitation of the partner.³³ Later legislative instruments and legal compilations give the same reasons for the dissolution of the partnership (“The partnership shall be dissolved on the demise of the persons or the thing”) but also “it shall be dis-

²⁹ Συνίσταται κοινωνία πράγματι καὶ ῥήματι καὶ δι’ ἀγγέλου: *Bas.* 12.1.4, *Procheiros Nomos* 19.5, *Syn. Maior* K.21.4, *Hexabiblos* 3.10.8.

³⁰ Συνίσταται κοινωνία ἐγγράφως ἢ ἀγράφως: *Ecloga* 10.4.

³¹ Ὅτε μὲν ἀπὸ συναινέσεως γένηται κοινωνία, χώρα τῇ περὶ κοινωνίας ἀγωγῇ, ὅτε δὲ χωρὶς συναινέσεως, κοινοπραξία ἐστίν: *Bas.* 12.1.32, *Syn. Maior* K.21.11, *Hexabiblos* 3.10.3.

³² Ἡ διηνεκῶς, τουτέστιν ἕως οὗ ζώσιν ἢ πρὸς καιρόν ἢ ἀπὸ καιροῦ ἢ ὑπὸ αἵρεσιν: *Bas.* 12.1.1, *Procheiros Nomos* 19.1, *Syn. Maior* K.21.1, *Hexabiblos* 3.10.1.

³³ Λύεται ἡ κοινωνία φθειρομένων τῶν προσώπων ἢ τοῦ πράματος: *Bas.* 12.1.4 and 61.

solved by cancellation, death, alteration of circumstances, and destitution.”³⁴ Throughout the duration of Byzantine law, the principal characteristic of the partnership continued to be its personal nature. As a result, it was dissolved on the death of one of the partners, upon cancellation by one of the partners, or if there was a change in his personal circumstances.

Under the provisions cited above, the partnership could also be dissolved as a result of losses (“destitution,” “on the demise of the thing”), corresponding in modern parlance to the disappearance of its capital after successive losses.

Precisely because the partnership was a personal institution, it would be dissolved when one of the partners issued a cancellation (*apagoreusis* in the relevant texts) of the contract by which it had been set up. In this event, the partnership was dissolved even if the cancellation was not “timely,” although in such circumstances the partner who made the cancellation would be obliged to indemnify the others for the losses they suffered as a result of his untimely cancellation.³⁵

Purpose of the Partnership

Naturally enough, the purpose of the partnership had to be both permissible and legal. However, over and above this general requirement, which did not apply only to the partnership, the purpose of the company, as can be seen in all the relevant provisions, was the benefit and profit of the partners, even if this was not expressly stated in the contract. “Those who merely form a partnership do so in the expectation of gain.”³⁶ Furthermore, “even if a partnership is merely formed and it is not stipulated to what end, the purpose of its formation is assumed to be the making of gains from sales and purchases and rents and contracts.”³⁷ When the partners made an agreement in each separate case, the partnership could have as its purpose to trade “both in kind and in money” or to carry out a single transaction and make a profit from that.³⁸ In the latter case, we have a kind of circumstantial partnership, a *societas unius rei*, and not the more long-standing and stable bond that was more common.

Contributions of the Partners and Sharing Profits and Losses

In order to achieve the purposes of the partnership, each partner was obliged to contribute to it, but the contribution could differ both from one partner to another and in terms of the type of partnership. The most common cases were those in which the

³⁴ . . . διαλύεται ἀπαγορεύσει, θανάτῳ, καταστάσεως ἐναλλαγῇ καὶ ἀπορίᾳ: *Bas.* 12.1.4, *Procheiros Nomos* 19.5, *Syn. Maior* K.21.4, *Hexabiblos* 3.11.1.

³⁵ *Bas.* 12.1.4, *Syn. Maior* K.21.7, *Procheiros Nomos* 19.9, *Hexabiblos* 3.11.

³⁶ Οἱ ἀπλῶς κοινωνήσαντες, ἐπὶ τῷ πόρῳ δοκοῦσι κοινωνεῖν: *Bas.* 12.1.7.

³⁷ Ἐάν ἀπλῶς γένηται κοινωνία καὶ μὴ λεχθῇ ἐπὶ τίνι, δοκεῖ συνίστασθαι ἐπὶ τῷ περιγενομένῳ πόρῳ καὶ κέρδει ἀπὸ πράσεως καὶ ἀγορασίας, μισθώσεως καὶ ἐκλήψεως: *Bas.* 12.1.7, *Procheiros Nomos* 19.7, *Syn. Maior* K.21.6, *Hexabiblos* 3.10.9.

³⁸ Καὶ ἐφ’ ἐνὶ πράγματι: *Bas.* 12.1.5, *Procheiros Nomos* 19.6, *Syn. Maior* K.21.5, *Hexabiblos* 3.10.8.

contributions were equal—“unless otherwise stated, the partners are equal”³⁹—but there were also other possibilities: “It may be agreed that one partner shall hold one share and the other two or three.”⁴⁰ The agreement might be for the deficit to be made up by personal labor, or indeed for one party’s share to consist only of personal labor: “if, however, he adds something to the partnership, either in terms of money or service or anything else,”⁴¹ “and if they [the partners] have unequal shares of the property,” and “the poorest of the partners shall make up in labor what he lacks in money.”⁴² “It shall be possible to form a partnership in which one person contributes money while the other contributes labor.”⁴³ “Some of them [contribute] their capital, others their labor.”⁴⁴ Provision was also made for the contribution of all the assets of the partners, in which case we are talking about a “partnership in all goods” involving an undertaking by the partners to contribute any donations or bequests they might acquire in the future: “They must make a special declaration that they are setting up a *totorum bonorum* partnership,”⁴⁵ and “If a partnership is formed *totorum bonorum*.”⁴⁶

Each partner had the right to a share in the profits produced, after the deduction from the capital formed from the partners’ contributions of the expenses incurred for the purposes of the partnership, and an obligation to participate in the losses when the company’s liabilities outweighed its capital. As a rule, shares were proportional to contributions, though it was permissible for different agreements to be made. However, it was not possible for one of the partners to be completely excluded from the profits: “It shall not be possible to make an agreement by which one party sustains only the losses while the other appropriates the profit.” Such a partnership would be declared invalid by the law, would be regarded as the result of fraud, and was called a Leonine partnership. However, it was not contrary to the purposes of the partnership for a partner to be relieved of a share in the losses if he was exposed to risks at sea or elsewhere or if he contributed personal labor of a value equal to the loss: “A person shall not suffer loss, but he shall share in the profits if his service is equal to the loss when he alone sails or takes risks or travels in foreign parts.”⁴⁷ The expenses of the partnership were those that took place for its purposes: “A person traveling abroad for

³⁹ Ἐάν μὴ λεχθῇ, τὰ μέρη ἴσα εἰσίν: *Bas.* 12.1.29, *Syn. Maior* K.21.10.

⁴⁰ Δυνατὸν δὲ συμφωνεῖν, τὸν μὲν ἔχειν ἓν μέρος, τὸν δὲ δύο ἢ τρία: *Bas.* 12.1.29, *Syn. Maior* K.21.10.

⁴¹ . . . ἔὰν μέντοι τι πλέον εἰσάγῃ τῇ κοινωνίᾳ, ἢ ἐν χρήμασι ἢ ὑπουργίᾳ ἢ ἐτέρῳ τινί: *Bas.* 12.1.29, *Syn. Maior* K.21.10.

⁴² Ὁ γὰρ πενέστατος ὡς ἐπίπαν τὸ λείπον ἐν χρήμασι διὰ τῆς σπουδῆς ἀντεισάγει: *Hexabiblos* 3.10.8, *Syn. Maior* K.21.5; cf. *Bas.* 12.1.5.

⁴³ Δύνανται συστήναι κοινωνία τοῦ μὲν ἐνὸς χρήματα συνεισφέροντος, τοῦ δὲ ἐτέρου σπουδῇ: *Bas.* 12.1.83.

⁴⁴ . . . ἢ τινῶν μὲν ἐνθήκην, ἐτέρου δὲ ἢ ἐτέρων τοὺς οἰκείους μόχθους: *Ecloga* 10.4.

⁴⁵ Δεῖ γὰρ αὐτοὺς εἰδικῶς ἐκφωνεῖν ὅτι τοτόρουμ βονόρουμ συνιστῶσι κοινωνίαν: *Bas.* 12.1.13.

⁴⁶ *Bas.* 12.1.3, *Procheiros Nomos* 19.3, *Syn. Maior* K.21.3, *Hexabiblos* 3.10.6.

⁴⁷ Οὐ δυνατὸν συμφωνεῖν, ὥστε τὸν μὲν μόνον τὴν ζημίαν, τὸν δὲ τὸ κέρδος οἰκειοῦσθαι; and Καὶ ἵνα τίς μὴ ζημιῶται μὲν, τοῦ δὲ κέρδους ἐστὶ κοινωνός, ἐὰν τοσαύτη ἐστὶν ἡ ὑπουργία, ὅσον ἡ ζημία, ἐὰν μόνος πληρῇ ἡ κινδυνεύῃ ἢ ξενιτεύῃ: *Bas.* 12.1.29, *Syn. Maior* K.21.10.

joint commercial purposes may charge to the partnership only such expenses as are incurred for its purposes.”⁴⁸ Similarly, debts contracted for the purposes of the partnership “are to be paid jointly.”⁴⁹

Operation of the Partnership

Given that the principal characteristics of the partnership were its personal nature, the relationship of trust among the members, and (secondarily) the assembly of capital, its smooth operation was safeguarded through a system of provisions that regulated the degree of liability of the partners, in each case, toward each other and toward third parties transacting, via them, with the partnership, since throughout the period of Byzantine law the partnership did not acquire a legal personality of its own and did not become a vehicle for obligations and rights. In view of this, and also of the fact that neither Roman nor Byzantine law recognized the institution of agency, the partnership’s transactions were conducted by the partners, who entered into personal contracts and undertook personal and unrestricted liability toward the third parties with whom they transacted. The extent of their liability would depend on the type of contract concluded on each occasion.

However, a partner entering into transactions with third parties was obliged to inform the other partners of the gains he had made from transactions conducted in his own name and on behalf of the partnership. He had a similar right to claim from the other partners a proportional share of the gains they had made from transactions both in their own names and on behalf of the partnership. This is to be deduced from the wording of the purpose of the partnership, “the income and profit generated,” and, indirectly, from the provision connected with the cancellation of the partnership: “whatever I acquire until the partner is acquainted (with my cancellation) is common property.”⁵⁰ Each partner was entitled to claim what he had spent on behalf of the partnership, once more in proportion to his share: “The debts contracted in the duration of the partnership shall be paid jointly.”⁵¹

The partners were liable to one another for simple negligence and, more specifically, were to be as assiduous in pursuing the company’s affairs as they were in looking after their own assets: “The partner may be held liable on account of negligence and idleness but he shall not be bound to take greater care than he would in his own affairs.”⁵² Indeed, the partner was still held liable “even if his actions were beneficial in many

⁴⁸ Ὁ ἀποδημήσας διὰ κοινὴν ἐμπορίαν μόνας τὰς εἰς αὐτὴν γινομένης δαπάνας λογίζεται τῇ κοινότητι: *Bas.* 12.1.50, *Procheiros Nomos* 19.19, *Hexabiblos* 3.10.28.

⁴⁹ . . . ἐκ τοῦ κοινοῦ δίδεται: *Bas.* 12.1.27, *Procheiros Nomos* 19.11, *Hexabiblos* 3.10.20.

⁵⁰ Ἐπὶ τῷ περιγενομένῳ πόρῳ καὶ κέρδει; and ὅσα μὲν κτήσομαι ἕως οὗ μάθῃ, κοινά: *Procheiros Nomos* 19.7 and 9, *Syn. Maior* K.21.6 and 7, *Hexabiblos* 3.10.9 and 8.

⁵¹ Τὰ συστάνατα χρέα τῷ καιρῷ τῆς κοινωνίας ἐκ τοῦ κοινοῦ δίδεται: *Bas.* 12.1.27, *Hexabiblos* 3.10.20, *Procheiros Nomos* 19.11.

⁵² Ὁ κοινωνὸς ἀπὸ ἀμελείας καὶ ῥαθυμίας ἐνέχεται, οὐ χρεωστὴ δὲ μεγάλῃν ἀσφάλειαν, ἀλλ’ οἶαν ἐν τοῖς ἰδίοις πράγμασιν: *Bas.* 12.1.70, *Syn. Maior* K.21.22, *Hexabiblos* 3.10.11.

other ways.”⁵³ The partners were not liable for misfortunes, that is, for losses caused by events “occurring *absit omen*,” as the *Basilics* defines the concept,⁵⁴ which would be shared out among the partners in accordance with their ratio of participation in the losses: “The partner is not held liable for matters of a fortuitous event.”⁵⁵ Vivid descriptions are given in the relevant texts of indicative cases of losses caused by misfortunes, with a distinction being drawn between theft and brigandage: the latter was regarded as a misfortune and the loss was sustained by all the partners, while losses resulting from the former were sustained only by the partner who had failed to take the necessary precautions.⁵⁶

During the last centuries of Byzantium, the term *koinonia* was no longer used, being replaced by the term *syntrophia*, applied both to ordinary commercial companies and to shipping associations. Among the most important sources for the activities of these partnerships is the collection of decisions of the synodal court of Constantinople. The decisions it handed down in various disputes among partners reveal a wide range of the entrepreneurial activities engaged in by *syntrophiai*, whose operations were still governed by the provisions concerning partnerships. As we have seen, these provisions were flexible, allowing entrepreneurs to unite their forces in the manner most appropriate to the achievement of the company’s objectives, contributing in kind, in cash, or in labor and receiving their profits (or sustaining losses) proportionally. This system encouraged entrepreneurial activities. *Syntrophiai* were set up to run shops of all kinds or to trade in other cities. Disputes connected with these *syntrophiai* were subject to the jurisdiction of the synodal court of Constantinople, whose decisions give us a vivid picture of the transactions and companies of the time, using graphic detail in the narrative of events to describe the dispute before the court.⁵⁷

Maritime Partnerships

Special mention should be made of the financing of maritime trade via the formation of partnerships whose sole purpose was entrepreneurial activity at sea. The beginnings of the maritime partnership are regarded as being the profit-sharing system (*kerdokoinonia*) referred to in the index to the *Rhodian Sea Law* or the system of debt-sharing (*chreokoinonia*) defined in the relevant provision of the same collection,⁵⁸ perhaps because this was the first time that the undertaking of the maritime risk by the partner contributing the capital was combined, in the same provision, with the corresponding

⁵³ . . . καὶ ἐν πολλοῖς ἑτέροις ὠφέλησεν: *Hexabiblos* 3.10.19 (= *Procheiros Nomos* 19.10).

⁵⁴ Παρ’ ἐλπίδα συμβαίνοντα: *Bas.* 12.1.50.

⁵⁵ Τὰ τυχερὰ ὁ κοινωνὸς οὐκ ἐπιγινώσκει: *Bas.* 12.1.50, *Procheiros Nomos* 19.14, *Syn. Maior* K.21.13, *Hexabiblos* 3.10.23.

⁵⁶ *Bas.* 12.1.50, *Procheiros Nomos* 19.14 and 15, *Syn. Maior* K.21.13, *Hexabiblos* 3.10.23 and 24.

⁵⁷ *MM* 2: no. 536, pp. 326–28; no. 564, pp. 374–75; no. 631, pp. 473–74; no. 632, pp. 474–75. Cf. E. Papagianni, Ἡ νομολογία τῶν ἐκκλησιαστικῶν δικαστηρίων τῆς βυζαντινῆς καὶ μεταβυζαντινῆς περιόδου σέ θέματα περιουσιακοῦ δικαίου (Athens, 1992), 1:112ff.

⁵⁸ *Rhodian Sea Law* 2.17. On this text, see D. Letsios, Νόμος Ῥοδίων Ναυτικός: *Das Seegesetz der Rhodier* (Rhodes, 1996).

release from liability for losses of the partner who contributed his personal labor and carried out the voyage.

However, this arrangement was not alien to Justinianic law. In practical terms, the provisions regulating the partners' membership of the partnership, which permitted the contribution of labor, when taken in conjunction with those regulating the distribution of profits and losses, which permitted one partner to be released from liability for losses, enabled the partners—in accordance with the principle of free will and depending on conditions and on their entrepreneurial requirements—to set up a partnership with all the characteristics of a maritime partnership as defined by the relevant provision of the *Rhodian Sea Law*.

Under the provisions of the *Rhodian Sea Law* from which we draw such knowledge as we have of this form of company, the *chreokoinonia* was a form of partnership in which the contribution of one partner always took the form of the payment of money (“if one partner gives gold or silver for the needs of the company”) while that of the other consisted of labor. This payment was a contribution to the partnership, which, as can be seen from the text of the provision, had maritime trade as its purpose and consequently, in accordance with the same provision, “if there should be losses resulting from risks at sea, then the partners will share the losses in accordance with their agreement, in the same proportion as they would have shared the profits if the voyage had ended well.”⁵⁹

Apart, of course, from the obvious legal differences between a contract to set up a partnership and a loan contract, the practical difference between the *chreokoinonia* and the maritime loan, which lies outside the scope of this discussion of the subject, was that the financier was a partner and, if the voyage turned out well, would collect profits in an agreed proportion of what had resulted rather than a predetermined rate of interest.

The entire legal tradition of Byzantium, down to Harmenopoulos, referred back to the *Rhodian Sea Law*, laying down that “judgment of all maritime affairs and matters of the sea shall be subject to the law of the Rhodians,” on condition, however, “that there is no other law opposed to the laws of the Rhodians.”⁶⁰

Given the elementary regulation of the *chreokoinonia* by the *Rhodian Sea Law* and the statement of Harmenopoulos, it can be seen that the provisions of Byzantine law governing company affairs acted as a supplement to the original provisions on the *chreokoinonia*. Thanks to the principle of the consensual contract that Byzantine law admitted, they allowed the contracting parties to agree on any supplementary terms (on condition, of course, that these were permitted by legislation) they might deem advantageous for the optimal achievement of the objectives of the partnership, which, in trade, was always the greatest possible profit. Such terms would be selected in accordance with the economic conditions in force at any time and in the given circum-

⁵⁹ Ἐὰν δὲ . . . συμβῇ ἐκ τῶν κατὰ θάλασσαν κινδύνων ἀπώλειαν γενέσθαι, καθάπερ τοῦ κέρδους ἔδοξε καὶ τὰς ζημίας πρὸς τὰ μέρη κατὰ τὰς συνθήκας ἀναδέχεσθαι: *Rhodian Sea Law* 2.17.

⁶⁰ Ὅταν μὴ ἄλλος νόμος ἐναντιούμενος τοῖς τῶν Ῥοδίων νόμοις εὑρίσκηται: *Hexabiblos* 2.11.1.

stances, thus helping the *chreokoinonia* to develop into a useful vehicle for maritime activities.

Under these provisions, which were usually of a dispositive nature, and thanks to their flexibility, the partners could determine their contributions and the distribution of the profits so that a partner who was contributing labor need not have a share of the losses or might also contribute money, in which case he would increase the capital of the partnership and his share of the profits, though he would also have a share in the losses (only in proportion to the capital he had contributed).

This more highly evolved form of the maritime partnership was used as a vehicle for their maritime enterprises by the Byzantine merchants of the last centuries of the empire, and it was in connection with companies of this kind that the synodal court was called upon to hand down the decisions from which we draw information.⁶¹ It was also the framework within which the associations formed by foreigners who had settled in Constantinople, most of them Genoese and Venetians, were set up and operated, together with the partnerships founded jointly by Byzantine and foreign partners, especially in Venetian-ruled areas. These associations were the *commenda* (unilateral or bilateral) and the *collegantia*, an examination of which is relevant in this discussion of the institutions by which maritime trade was financed since, in the Byzantine period, they were used to promote commercial activities related to the sea.⁶²

The unilateral *commenda* was an association formed by agreement between two partners, of whom one (the *socius stans*) put up the capital and the other (the *socius tractator*) undertook to make the voyage and to trade using the capital. The duration of the partnership might be fixed at a specific period, or it might cover only a single voyage. After the agreed period had elapsed and the *socius tractator* had returned, the profits realized—if there were any—were divided according to the original agreement. If the voyage produced a loss, it would be borne by the *socius stans*. The unilateral *commenda* may have developed in the West as a substitute for the maritime loan in view of the ban on the charging of interest by the western church. The bilateral *commenda* and the Venetian *collegantia* differed from the unilateral *commenda* in that the *socius tractator*, too, could invest money in the partnership, thus acquiring a share of the profits (though also in the losses) proportional to the money he had put up.

The operation, organization, regulation, and potential under Italian law of these associations, which in the last centuries of Byzantium were also used by Byzantine entrepreneurs, did not differ from the corresponding parameters for maritime partnerships governed by Byzantine law. The similarities between these types of partnership (the *commenda* and the *collegantia*, on the one hand, and the maritime partnership under Byzantine law, on the other) can be explained by the fact that both stemmed

⁶¹ MM 2: no. 656, p. 511; no. 676, p. 550–51; no. 680, p. 560, and cf. Papagianni, Νομολογία, 1:103–4.

⁶² See also D. Gofas, “Εμπορικές επιχειρήσεις Ἑλλήνων τῆς Κρήτης γύρω στό 1300,” Ἐπιθεώρηση Ἐμπορικοῦ Δικαίου 41 (1990): 1–34; A. E. Laiou-Thomadakis, “The Byzantine Economy in the Mediterranean Trade System, Thirteenth–Fifteenth Centuries,” *DOP* 34/35 (1980–81): 177–222; N. Oikonomides, *Hommes d'affaires grecs et latins à Constantinople (XIIIe–XVe siècles)* (Montreal, 1979), *passim*.

from the same family of law: Roman law, which acknowledged the *societas* of capital and labor. However, there was another substantive factor in the similarity between them: it is only natural that the rules of law that regulate similar entrepreneurial activities in similar conditions, in the same period, in the same part of the world, should themselves be similar, resulting in similar legal forms to meet the needs of the period and the conditions.

The attribution to each company of a description as a *commenda*, a *collegantia*, or a Byzantine maritime partnership is in every case a matter of fact. What can be discerned in the various instances of such partnerships is the existence of capitalists who systematically invested in entrepreneurial activities, on land and at sea.

Part Six
General Traits of the Byzantine Economy

Economic Thought and Ideology

Angeliki E. Laiou

The economic thought and the economic ideology of the Byzantines have not yet been the object of detailed study, even though some scholars have written on specific aspects of the ideology that underlay or at least referred to economic behavior. This historiographical poverty is partly due to a historical one: in Byzantium there was much less systematic treatment of economic problems than in western Europe, whose theologians, Romanists, and canonists discussed in depth the numerous questions associated with profit, price, trade, and moneylending. As a result, the economic thought of the Byzantines has to be reconstructed on the basis of gleanings from many disparate sources. For example, notions regarding the just price or the just value of a commodity have to be teased out of imperial legislative or other normative texts and from court decisions, rather than from treatises specifically devoted to these topics. However, despite the dearth of systematic discussion, there was both coherent thought regarding economic matters and ideological positions on some important economic questions.

The economic thinking of the Byzantines reflected, on the one hand, received Roman law, adjusted though it became to circumstances, and, on the other hand, ideas regarding self-sufficiency, trade, price formation, and profits, which sometimes originated in classical Greece or the edicts of Roman emperors and sometimes derived from patristic pronouncements. It is less important here to trace the provenance of various ideas and more important to observe the medieval synthesis that resulted. I consider ideology to differ from economic thought: whereas economic thought involves questions that have an immediate effect on economic practice (e.g., rates of profit, interest rates, price formation), ideology is more general in its purview, embracing broad issues that involve social, political, and economic concerns. Different though they are, they are not independent of each other, and ideology can, eventually, influence both economic thought and economic practice. Economic analysis is also a different category, for it seeks to identify and explain economic laws. In the Byzantine Empire, some attempts at economic analysis appear in commentaries on Aristotle.¹

¹ On autarky, see M. Kaplan, *Les hommes et la terre à Byzance du VIe au XIe siècle: Propriété et exploitation du sol* (Paris, 1992), 3, 256, 493ff; M. Hendy, *Studies in the Byzantine Monetary Economy c. 300–1450* (Cambridge, 1985), 565–68. Cf. G. Dagron, “The Urban Economy, Seventh–Twelfth Centuries” *EHB* 428–29. On ideological attitudes toward trade and the merchants, see A. Giardina, “Modi di scambio e valori sociali nel mondo bizantino (IV–XII secolo),” in *Mercati e mercanti nell’alto medioevo: L’area*

To what extent ideology affected people's actions, in the economic sphere as in other spheres, is a very large question, which scholars have attempted to answer in a variety of ways.² As will be seen in what follows, my own view is that sometimes ideological posturing has little to do with reality, while at other times it can, indeed, become a factor of production. What should be kept in mind is that the Byzantines were much more conservative—and deliberately so—in their ideological pronouncements than they tended to be in practice.

Economic ideology, as it developed in Byzantium, owes a great deal to Christian thinking and Christian positions regarding the material life. Perhaps the most important overall concept in this respect is the Christian negation of worldly riches, which places a high value on the noneconomic transfer of goods through charity, and an equally high value on behavior that is irrational in economic terms but rational in spiritual terms and in the divine economy.³ This type of behavior was constantly celebrated in saints' lives and in descriptions of miracles that constitute what V. Déroche has called "l'économie miraculeuse."⁴ A story related in the seventh-century *Pratum spirituale* provides a good example of noneconomic behavior that nonetheless proves more profitable, even on this earth, than the most rational, profit-seeking person could hope for. It is the story of a man from Nisibis, a pagan, who wanted to lend his capital (50 large miliaresia) at interest. His wife, who was a Christian, persuaded him to give it to the poor, promising him that his capital would be doubled and would also earn interest. Three months later, when the man tried to recover his money, he found a single miliaresion with which he proceeded to buy a fish, among other items of food. Inside the fish was a precious stone that, when brought to the jeweler/money changer,

euroasiatica e l'area mediterranea (Spoleto, 1993), 523–84, and K.-P. Matschke, "Bemerkungen zu 'Stadt-bürgertum' und 'Stadtbürgerlichem Geist' in Byzanz," *Jahrbuch für Geschichte der Feudalismus* 8 (1984), esp. 267–84; see also Dagron, "Urban Economy," 415–17, 459–61, and A. E. Laiou, "Exchange and Trade, Seventh–Twelfth Centuries," *EHB* 753–54. Cf. A. P. Kazhdan, "Byzantine Town and Trade as Seen by Niketas Choniates," *ΣΤΕΦΑΝΟΣ: Studia byzantina ac slavica Vladimiro Vavřínek ad annum sexagesimum quintum dedicata* (= *BSL* 56 [1995]), 209–18, who states that Choniates disapproved of trading activities; on lending at interest, see A. E. Laiou, "God and Mammon: Credit, Trade, Profit and the Canonists," in *Byzantium in the 12th Century: Canon Law, State and Society*, ed. N. Oikonomides (Athens, 1991), 261–300; eadem, "The Church, Economic Thought and Economic Practice," in *The Christian East: Its Institutions and Its Thought*, ed. R. J. Taft (Rome, 1996), 435–64; and eadem, "Nummus parit nummos: L'usurier, le juriste et le philosophe à Byzance," *Académie des Inscriptions et Belles Lettres* (Paris, 1999): 585–604; on honest profit and the just price, see A. P. Kazhdan, "Iz ekonomicheskoi zhizni Vizantii XI–XII vv.," *VizOch* 2 (1971): 208–12. The most recent study of the medieval world has virtually nothing on Byzantium: L. Baeck, *The Mediterranean Tradition in Economic Thought* (London, 1994). I am preparing a study of Byzantine economic thought (hereafter Laiou, "Byzantine Economic Thought") that includes a discussion of Byzantine commentaries on Aristotle. See also the recent article by Christos P. Baloglou, "Economic Thought in the Last Byzantine Period," in *Ancient and Medieval Economic Ideas and Concepts of Social Justice*, ed. S. Todd Lowry and B. Gordon (Leiden, 1998), 405–38.

² For a summary of scholarly positions, see Matschke, "Bemerkungen," 268–69. To those who think that ideology had a very real role in the development of the economy may now be added A. Giardina.

³ On charity in the early centuries of the Byzantine Empire, see E. Patlagean, *Pauvreté économique et pauvreté sociale à Byzance, 4e–7e siècles* (Paris, 1977), esp. 181–203, 273–74; on the "Christian anthropology of the gift," see Giardina, "Scambio e valori," 551.

⁴ V. Déroche, *Etudes sur Léontios de Néapolis* (Uppsala, 1995), 246ff.

fetches the sum of 300 miliaresia. Thus what starts out as perfectly rational economic intent is taken out of the realm of economics and into that of charity. Whatever the spiritual rewards (at the end of the story the man converts to Christianity), there are also very high material rewards, since the capital earns an interest equivalent to 2,000% a year.⁵

Material rewards for economically unsound behavior abound in miracle stories and are surely an indication that the intended audience placed some value on material well-being and profit. However, what is important in ideological terms is that, consistently in these stories, which recur throughout the Byzantine period, it is uneconomic behavior that is being rewarded; even the thoroughly economic ideas of profit and returns on capital are being appropriated by a code of Christian ethics that expects divine Providence, rather than human action, to provide economic returns. Furthermore, miracles are, by their nature, rare occurrences; normally, charity would be its own, noneconomic, reward.

Patristic writings provide powerful statements that illustrate the position of the church toward economic and productive activity. Agriculture is considered a relatively safe activity, as long as the reference is to the labor of the poor peasant; on the other hand, the landowners, who exploit the peasant and make money from the land, are castigated.⁶ St. Basil of Caesarea, in a passage that signals the uncertainty inherent in economic and productive activity, includes agriculture in the list of economic enterprises that are at the mercy of nature and fortune, and therefore of uncertain yield.⁷ All behavior that seeks material reward through material means (i.e., through economic activity) is presented as risky, both because of physical risks and because of the spiritual danger of bringing the person involved into the sins of *philargyria* and *pleonexia* (avarice and greed). In its extreme form, this ideology would place the highest value on a life with no productive activity and no economic concerns; such is the life of the ascetic, but it is not one that could be held up as a workable model for the rest of society. The consequence, for society as a whole, is an insistence on the virtues of self-sufficiency.

Autarky, or self-sufficiency, is an ideological norm that goes back to classical times.⁸ It was reinforced by Christian moral teaching. Saints' lives, when they do not extol the high social and economic status of the saint's family, insist on its self-sufficiency: to come from a family of moderate means, and a self-sufficient household, was considered a virtue, although, interestingly enough, so were aristocratic origins, associated with wealth.⁹ In terms of imagery, the image of the man reposing under his own olive and

⁵ Laiou, "Church," 445–46. An analogous story may be found in St. Augustine, *De civitate Dei* 22.9, PL 41:765–66, as noted in C. Morrisson, "La découverte des trésors à l'époque byzantine: Théorie et pratique de l'ΕΥΡΕΣΙΣ ΘΗΣΑΥΡΟΥ," *TM* 8 (1981): n. 47.

⁶ St. John Chrysostom, in PG 58:591.

⁷ PG 31:272.

⁸ M. I. Finley, *The Ancient Economy* (Berkeley, 1973), 109–16. For a different view on the Greco-Roman economy, see C. Nicolet, *Rendre à César: Économie et société dans la Rome antique* (Paris, 1988).

⁹ See, for example, *Vita of St. Stephen the Younger*, PG 115:1073c, and *vita* of Theophylact of Nikomedeia, ed. A. Vogt, "St. Théophylacte de Nicomédie," *AB* 50 (1932): 71. For the quintessential aristocratic and wealthy saint, one may look to St. Michael Maleinos. When Manuel/Michael Maleinos first approached an anchorite and tried to become his disciple, he lied, pretending that he was the

fig trees, a picture that goes back to the Old Testament, is a compelling one and recurs over time.¹⁰

One may argue that the principle of self-sufficiency was an expression, in the economic sphere, of broader principles that are political and therefore better known to historians. In the political ideology of the Byzantines, it was one of the main duties of the emperor to safeguard the territory of the state and to recover lost territories. The point is clearly made in Title II.2 of the *Eisagoge* and is repeated in the *Taktika* of Leo VI, where it appears as a major element of the just (= defensive) war.¹¹ A clear statement of the negative value placed on aggressive warfare and the positive value of recovering one's own may be found in Arethas' comparison of Alexander the Great's conquests with a victory against the Arabs in 901: "He [Alexander] was greedy, initiating injustice; not even the Hellespont, that national limit, could check his assault. . . . But your actions, O most good Emperor, are as free of grasping ambition as they are remote from greed. . . . For you do not order the army to rush against what does not belong to us, but rather towards those who had, once, belonged to the Romans, . . . to restore [that lost flock] to its former inheritance."¹²

The political concept is one that promotes the integrity of "just" frontiers, which included territory the Byzantines considered legitimately theirs. In this schema, there is no aggression and no injustice done to others. That the emperor's concern is with justice in both the political and the economic sphere is made clear by the statement that "[nothing so pleases the emperor] as the peace and prosperity of his subjects and the improvement and redress of political fortunes."¹³ The economic concept promotes the integrity of the productive unit; self-sufficiency safeguards it, and in that schema, no economic injustice is done to others. Both concepts are heavily indebted to the middle Byzantine idea of justice, which included the concern that the possessions of all subjects (especially the weaker ones) should be safeguarded and that a proper and orderly society should not be disturbed by encroachment on the rights and possessions of others.¹⁴ The concept of autarky, then, is inscribed in a larger ideological context. On the other hand, political aggression would be comparable to *pleonexia* in the eco-

son of people who lived ἐν ἀνταρκείᾳ, so that the power and wealth of his family would not frighten the anchorite: A. E. Laiou, "The General and the Saint: Michael Maleinos and Nikephoros Phokas," in *ΕΥΡΥΧΙΑ*: Mélanges offerts à Hélène Ahrweiler, 2 vols. (Paris, 1998), 399–412. Examples of saints from "self-sufficient" households during the Palaiologan period include St. Romylos and St. Dionysios. Most of them came from richer families: A. E. Laiou-Thomadakis, "Saints and Society in the Late Byzantine Empire," in *Charanis Studies: Essays in Honor of Peter Charanis*, ed. A. E. Laiou-Thomadakis (New Brunswick, N.J., 1980), 84–114, esp. 87–89.

¹⁰ See, for example, *Theophanes Continuatus*, ed. I. Bekker (Bonn, 1838), 258, elaborating on Micah 4:4.

¹¹ Zepos, *Jus*, 2:240; R. Vári, *Leonis imperatoris Tactica*, 2 vols. (Budapest, 1917–22), 1:3–5.

¹² R. J. H. Jenkins, B. Laourdas, and C. A. Mango, "Nine Orations of Arethas from Cod. Marc. Gr. 524," *BZ* 47 (1954): no. 6, p. 33.

¹³ *Leonis Tactica*, 1:3.

¹⁴ A. E. Laiou, "Law, Justice, and the Byzantine Historians: Ninth to Twelfth Centuries," in *Law and Society in Byzantium, Ninth–Twelfth Centuries*, ed. A. E. Laiou and D. Simon (Washington, D.C., 1994), 154–55, 165, 183.

conomic sphere; both condemned, both practiced. As will be seen below, economic justice embraced much more than the ideal of self-sufficiency and, in practice, affected economic behavior not in the matter of autarky, but primarily in matters connected with profits and prices.

The fullest description of the pleasures of self-sufficiency is in the *Strategikon* of Kekaumenos, an eleventh-century source. This is the work of a landlord and soldier, and it extols the good management of the household, as Xenophon, his ancient counterpart, had done many centuries earlier. Good management means “an abundance of wheat, wine, and everything else, seed and livestock, edible and movable.” The landlord should “plant trees of all kinds, and reed-beds, so that you may have a return without having a yearly worry” and should acquire farm animals: both oxen for plowing and pigs, sheep, and other animals grown for their meat. He should diversify his activities, so that he could both cover some of the needs of his estate and make a sure investment: “make for yourself things that are self-working (*autourgia*): mills, workshops, gardens, and other such things as will give you an annual return whether it be in rent or crop.”¹⁵ If he does not take good care of his estate, all manner of bad things will happen, eventually leading him to the moneylenders, who will probably end up by taking both the estate he had inherited from his parents and whatever he had accumulated himself. Kekaumenos would have embraced the tenet “neither a borrower nor a lender be,” and to that he added, “do not stand security for anyone.”¹⁶ This seems to be taking the landlord outside the market and its activities, but even Kekaumenos does not mean to do so completely, for he says that if the estate is mismanaged, “when you wish to make purchases you will find that you have no money.”¹⁷ Indeed, what is preached here is self-sufficiency with a difference: a well-run household should make sure it has the necessities, namely, wheat and wine. Once this minimum is met, one can indulge in luxuries, buy things that are not essential, build houses.¹⁸

This very conservative man certainly gave voice to an equally conservative ideology, which required that one diversify his economic activities sufficiently so that he would have only sporadic need of the market. His statement is clear and succinct and also echoes ancient ideas, especially those of Xenophon. It is thus seductive to historians; but it is belied by practice, and even by normative statements that are no less true for being diffuse and buried in less deliberately conceived texts. Let us begin with an example of a counterideology.

For that, one may look at the *vita* of St. Neilos of Rossano, who died in 1004, and is therefore chronologically not far removed from Kekaumenos.¹⁹ St. Neilos wished to

¹⁵ G. G. Litavrin, *Sovety i rasskazy Kekavmena* (Moscow, 1972), 188–90; cf. Hendy, *Studies*, 565–66, whose translation of this quotation I am using.

¹⁶ Litavrin, *Sovety i rasskazy*, 190–92, 212–16, 218.

¹⁷ *Ibid.*, 190.

¹⁸ *Ibid.*

¹⁹ What follows owes much to A. Guillou, “Production and Profits in the Byzantine Province of Italy (Tenth to Eleventh Centuries): An Expanding Society,” *DOP* 28 (1974): 91–109; the pertinent passage of the *vita* is published on pp. 105–6 and translated and commented upon on pp. 91–92. I have used my own translation here.

test the commitment of the monks of St. Adrian, a monastery he had founded near Rossano in Calabria, and to teach them “to prefer submission to life itself.” He therefore conceived a test that consisted of an “irrational command” (ἔδοξε τοίνυν αὐτῷ πειράσαι αὐτοὺς ἐν τινι παραλόγου ἐπιταγῆς πράγματι). One day he said to them, “We have planted many vineyards, and this is counted as greed (πλεονεξία) on our part, since we have more than what is necessary for us. Let us cut them down and leave only what is needed for self-sufficiency (μὴ ἐάσωμεν εἰ μὴ μόνον τὸ αὐτάρκες).” The monks did not say “the man is mad, he knows not what he is doing—no such thing has ever been seen or heard of,” but, in full obedience, cut down the vines. St. Neilos considered this as proof that their obedience was equal to that “of olden days” (those of the heyday of asceticism? or the days of the martyrs?). The story reached Mount Athos and Sicily, and all marveled, for no one “could comprehend the reason for this affair, and some said the monks were drunk, others that the father [St. Neilos] was angered and that is why he did this, while still others thought that the monks were unable to cultivate the vines, there being too many of them.”

The story starts with an ideological statement on the importance of self-sufficiency as a virtuous state of being for monks. But, in fact, the dominant ideology that may be extracted from the affair is quite a different one. The monks of Calabria, as the monks of Mount Athos, apparently had been oblivious to the virtues of self-sufficiency and had been producing wine (and fruit, possibly) for the market. Profit was necessarily involved. The monks, and everyone else, including the hagiographer, considered St. Neilos’ behavior quite irrational; witness the effort to find a rational and economic justification of it, in the explanation that the monks perhaps did not have sufficient labor to cultivate their extensive vineyards. So ingrained was the ideology (and practice) of economic activity far in excess of self-sufficiency, that St. Neilos could not conceive of a more stringent test of the obedience of his monks. In sum, the dominant ideology in this story is not self-sufficiency but profitable production, and it was certainly the dominant practice.²⁰

It is, in fact, practice that holds the key to the real import of the ideal of self-sufficiency. Practice suggests that self-sufficiency was an unrealizable wish insofar as most of the peasantry was concerned, and an ideal to which the aristocracy and the monasteries paid only lip service. For the peasants, J. Lefort has shown that, while not all could have a surplus or break even, there were those who could show a profit, even after paying taxes, and that profit was capable of being invested. Indeed, self-sufficiency was an ideal of the peasantry in most preindustrial societies. But it was not a reality, and peasants were involved in the market, although their dependency on the market varied according to place and time.²¹ The polyculture that characterizes

²⁰ For the production of another cash crop, eminently made for the market, namely silk, in Byzantine Italy, see the rest of Guillou’s article. For an attitude similar to the one expressed in the story, see B. Krivochéine and J. Paramelle, *Syméon le Nouveau Théologien: Catéchèses* (Paris, 1964), 1: no. 5, pp. 440–46.

²¹ On this, see L. de Ligt, *Fairs and Markets in the Roman Empire* (Amsterdam, 1993), 149–54.

Byzantine agriculture both promotes self-sufficiency and transcends it. Historians have drawn a distinction between diversified agriculture and specialized agriculture, the latter alone being thought to be an efficient use of resources.²² Specialization, however, is a phenomenon of the industrial period and cannot easily be expected of preindustrial societies. In the Byzantine Middle Ages, diversified agriculture included a number of highly marketable crops, which brought the peasant to the marketplace, and thus out of self-sufficiency.

The aristocracy invested surplus funds in land clearance, as well as in urban real estate, in artisanal activities, and, eventually, in trade.²³ The same is true of monasteries, where one might have expected the ideology to have had its clearest effect. The novel of Nikephoros II (964) on monastic property is a clear indication that the pious emperor wanted monasteries to participate in productive enterprises, and productive investments to take place on their lands.²⁴ But it is the development of the monastic communities of Mount Athos that provides the clearest proof of the fact that the ideology of self-sufficiency was inadequate to encompass Byzantine realities. The early documents of Mount Athos, including the *typikon* issued by St. Athanasios (in 973–975), are indeed replete with ideas of self-sufficiency, which include agricultural activity and exclude any trading for profit. Within seventy years, the monks were selling their own surplus and that of others, fully participating in the economy of exchange. In response to accusations of avarice and greed, they agreed to engage in trade only for their own needs, thus once again referring to the idea of self-sufficiency, which was, however, destined to remain a dead letter.²⁵

It is, perhaps, possible to get an indirect view of what agricultural properties the Byzantines valued most. Those were the *autourgia*, assets that necessitated an initial investment and were then thought to produce revenues “from their own nature,” that is, without further expense other than labor. Mills, vineyards, olive groves, salt pans, meadowlands, brickyards, and shops were in that category; their construction or development was considered melioration of the land and was protected in all sorts of ways, both by contracts of land tenure (*emphyteusis*) and by imperial privileges that assured the use of the improved land to the owner.²⁶ The high value placed on *autourgia* has little to do with the ideology of self-sufficiency and much more to do with ideas of profitability and profit.

Autarky or self-sufficiency, as has been observed by G. Dagron, was more a literary construct than an economic model.²⁷ In practice, this ideal was either unattainable or

²² Finley, *Ancient Economy*, 106–7.

²³ See Dagron, “Urban Economy,” 414ff and passim, and E. Papagianni, “Byzantine Legislation on Economic Activity Relative to Social Class,” *EHB*.

²⁴ N. Svoronos, *Les Nouvelles des empereurs macédoniens concernant la terre et les stratiotes*, ed. P. Gounaridis (Athens, 1994), 151–61. On this novel, see E. Papagianni, “Legal Institutions and Practice in Matters of Ecclesiastical Property,” *EHB* 1065–66.

²⁵ See Laiou, “Church,” 460–61.

²⁶ *Ibid.*, 458–59.

²⁷ Dagron, “Urban Economy,” 428.

inadequate, and landlords did not in fact shun the market, as the common reading of Kekaumenos would have them do. This is a case where the ideology was removed from reality. In economic thought, it was superseded, certainly in the course of the tenth century, if not earlier, by the less proper but equally powerful stress on profit. Ideas of self-sufficiency and profit are connected with views about exchange, trade, and the market, to which I now turn.

The pursuit of profit, in the thinking of the Byzantines, is a characteristic of the merchant. An old *topos*, which goes back at least to patristic times and even to antiquity, links the pursuit of profit with the risks involved in mercantile activity: the merchant is the man who is willing to run all kinds of risks in search of profit.²⁸ It is well known, and in no need of elaboration here, that the fourth-century church fathers considered the risks to be moral as well as physical, and took a dim view of the merchant's profit. This, however, was not the case in Byzantium, at least of the middle and late period, except when rigorist authors made deliberate ideological statements. A first approximation of what the Byzantines thought about profit may be gained by two texts, dating to the second half of the tenth century and the beginning of the eleventh.

The later text is a treatise by Symeon the New Theologian on Eph. 5:16, "redeeming the time because the days are evil," dated by the editor to sometime between the years 1000 and 1009.²⁹ In it, the author speaks of the great damage one will suffer if one neglects spiritual matters, and illustrates this by referring to the economic damages a slothful merchant will incur by neglecting the good conduct of his trade. The good merchant, motivated by the hope of profit (τῇ προσδοκίᾳ τοῦ κέρδους), undertakes long journeys disregarding the dangers, the fatigue of the journey, the fear of robbers; he brings money with him to the fair and immediately begins to trade, without wasting his time and money in unprofitable pursuits. His reward is that he returns home with great profits (ἐμπορευσάμενοι καὶ μετὰ κέρδους μεγάλου ὑποστρέψαντες). While Symeon's parable is in many ways indebted to patristic writings and imagery, one fact stands out that is relevant to our topic: the pursuit of profit is a positive rather than a negative activity. Not one word is breathed regarding the dangers to the immortal soul of maximizing profits; on the contrary, the slothful merchant, the one whose example should not be followed, is he who, through his laziness, does not manage to turn a profit.³⁰

²⁸ See, for example, St. Basil of Caesarea, who speaks of the "sweat of the farmers and the dangers of trade" (πόνους γεωργικούς . . . ἐξ ἐμπορίας κινδύνους): PG 31:281. The *topos* regarding merchants appears in many Byzantine authors, among them Symeon the New Theologian, Mauropous, Manasses, and a number of hagiographic sources.

²⁹ J. Darrouzès, *Syméon le Nouveau Théologien: Traités théologiques et éthiques* (Paris, 1967), 2: no. 12, pp. 386ff. On this, cf. A. E. Laiou, "Händler und Kaufleute auf dem Jahrmarkt," in *Fest und Alltag in Byzanz*, ed. G. Prinzing and D. Simon (Munich, 1990), 53–70, 189–94, repr. in A. E. Laiou, *Gender, Society and Economic Life in Byzantium* (Aldershot, 1992), art. 11.

³⁰ This is not by any means to argue that Symeon had forgotten Christian teaching regarding avarice: see his statements on *pleonexia* in Krivochéine and Paramelle, *Syméon le Nouveau Théologien, Catéchèses*, 2: no. 9, pp. 110–12. In this passage, however, he condemns those who have dealt unjustly

A few decades earlier, Symeon Metaphrastes (d. ca. 1000), a high imperial official and the well-known compiler and purifier of saints' lives, voiced a similar view in his version of the *vita* of St. Spyridon of Trimithous. The original *vita*, written in the second half of the seventh century, features a sea captain (who also engaged in trade) who had borrowed some money from the saint (either in a sea-loan or in an early form of the *commenda* contract). That version of the *vita* had focused on the sea captain's efforts to cheat the saint by pretending to return the money, the saint's discovery of the ruse, and the man's repentance.³¹ The Metaphrastic version projects a similar moral message: do not be greedy, and do not cheat. However, Symeon Metaphrastes also engages in a good deal of editorializing. The sea captain is here specifically called a merchant; trade seems to be his primary activity. The cause of his economic downfall, and the proximate cause of the discovery of his dishonesty, was that "he had spent the money in expenses that were not geared toward making a profit; hence he became indigent (δαπάναις γὰρ, ὡς ἔοικεν, οὐ πρὸς κέρδος ὁρώσας τὸ χρυσίον ἀνηλωκῶς, ἔπειτα πρὸς ἀπορίαν ἐλάσας)" and went back to the saint to borrow more money. The story then unfolds of the discovery of his ruse and the saint's forgiveness and parting words: "that he should not covet the goods of others, nor should he pollute his conscience with ruses and lies. For the gain acquired from such actions, he said, is not profit, but manifest damage (μὴ οὕτω τῶν ἀλλοτρίων ἐπιθυμεῖν, μηδὲ δόλοις καὶ ψεύδεσι καταμιαίνειν τὸ συνειδός. Τὸ γὰρ ἐκ τοιούτων, φησὶ, περιποιούμενον οὐ κέρδος ὅλως, ἀλλὰ ζημία σαφής)." ³² The meaning is equally manifest. Money borrowed for trade should be used for profitable investment; if it is used for consumption instead, one gets into trouble. What is condemned here is not at all the merchant's profit, which is conceived as a legitimate part of his trade; rather, it is *philargyria* that caused the merchant in question to misbehave; that, and his unproductive use of money.

These examples are meant to be illustrative, not exhaustive. What they illustrate is the fact that the merchant's profit was perfectly acceptable in the economic thinking of the Byzantines, with all that such a position implies. Nowhere, for instance, do we find the condemnation of profits deriving from mercantile enterprise as unclean money, as sometimes was the case among theologians in western Europe. If saints' lives of the middle period are a good guide in this respect, we can say that they do, sometimes, refer to dirty money, that the pious may not touch, but it is not the merchant's profit that is at issue. Rather, what is unclean is the money made from exactions and from the unjust treatment of the poor; the people who are guilty of such practices are functionaries or the powerful or, in one case, Emperor Theophilus, who was said to

with others, having appropriated what originally was common property; they are judged as virtually thieves, in what is a very unusual construction for Byzantium. A similar thought may be found in Alexios Makrembolites: I. Ševčenko, "Alexios Makrembolites and His 'Dialogue between the Rich and the Poor,'" *ZRVI* 6 (1960): 204.

³¹ P. van der Ven, ed., *La légende de S. Spyridon, évêque de Trimithonte* (Louvain, 1953), chap. 21, p. 94. Cf. Laiou, "Exchange and Trade," n. 48.

³² PG 116:458–60.

have left money to the poor and the monks upon his deathbed conversion to the orthodox position on the veneration of icons.³³

In fact, the Byzantines believed that the merchant's profit was justified and legitimate. However, the Byzantines, like the ancient philosophers, were uneasy about "the art of making money," Aristotle's *chrematistike*. In Byzantine thought and practice, as in that of all societies that were the cultural heirs of ancient philosophy and Christianity, there was a constant balancing act between the notion of the freedom of exchange and the conflicting notion of social and economic justice.

The concepts of just value, just price, and just profit are intimately interconnected. In Byzantium, it was primarily the state that gave specific content to these concepts that appear in rather too general and inchoate a form in the writings of churchmen. Once again, we have little theoretical or systematic discussion of the just value or the just price or the just profit. The information comes from legislative codes or novels or regulatory texts (primarily the *Book of the Eparch*) and is, perhaps not unexpectedly, fragmented.

The just value (ἄξία, διατίμησις) differs somewhat from the just price (δικαία τιμή, δίκαιον τίμημα). As I understand it, one major difference lies in the fact that the concept of just value extends not only to land or commodities that are exchanged, but also to labor. Furthermore, while just price presupposes a transaction, the just value may simply be the result of an evaluation, not necessarily attended by a transaction. Beyond these somewhat evanescent differences, it is important to establish that the concept of just price is not dependent on any particular process of price formation. The just price may be the price agreed upon by two contracting parties; it can be the market price, arrived at by the global interplay of supply and demand, that is, the ultimate result of negotiations between numerous buyers and sellers; it may be a price imposed by administrative action; it may be a price that is regulated although not imposed by administrative action. Almost all of these possibilities were envisaged by the Byzantines and were present in Byzantium, with different weight at different times. The only exception is the price imposed by administrative action, for which we do not have examples in practice or in theory.³⁴ It is true that, in an eleventh-century treatise, the value of land is said to be fixed by imperial law, but that statement is immediately followed by another, which says that it also depends on local custom: "there are differences in the evaluation [of land] according to imperial decrees and the customs of the place."³⁵ This indicates that the fiscal value of the land, which is all that the treatise is concerned with, is not an administered price but rather an evaluation that takes into account the market price of land.

³³ F. Dvornik, *La vie de St. Grégoire le Décapolite et les Slaves macédoniens au IX^e siècle* (Paris, 1926), 55; I. van den Gheyn, "Acta graeca Ss. Davidis, Symeonis et Georgii Mitylenae in insula Lesbo," *AB* 18 (1899): 245.

³⁴ There is nothing like Diocletian's Edict on Prices in Byzantium. On the issues discussed here, see A. E. Laiou, "Κοινωνική δικαιοσύνη: τὸ συναλλάττεσθαι καὶ τὸ εὐημερεῖν στὸ Βυζάντιο," *Πρακτικὰ Ἀκαδημίας Ἀθηνῶν* 74 (1999): 103–30.

³⁵ *Géométries du fisc byzantin*, ed. J. Lefort et al. (Paris, 1991), 62: "Ἐχει δὲ διαφορὰν περὶ τὰς διατίμῃσεις κατὰ τε τὰ βασιλικά προστάγματα καὶ τὰ τῶν τόπων ἔθιμα.

In Byzantium, as in the Roman Empire, the laws governing exchange were predicated upon the idea of free contractual negotiation. In law, exchanges are made, and the sale price is established, through negotiation between competent parties, acting freely, that is, without fear or under threat of force, and involving things of which they are the proprietors.³⁶ Ruse or force annuls the contracts in law; in practice, acts of sale are often preceded by a formula that states that the seller acts freely, without constraint or fear. "Ruse" in this context means actual fraudulent misinformation regarding the items exchanged. While this is forbidden, it is permissible for the two parties to try to outwit each other (*se circumvenire*, περιγράφειν ἀλλήλους) in establishing the sale price. In the medieval West, this statement caused a good deal of problems to canonists, Romanists, and theologians, since it seems to legitimate lying, which in any case was seen as an integral, and negative, aspect of commercial exchange.³⁷

There was, however, an important corrective, which existed already in Justinianic law and was considerably extended in the middle Byzantine period. It consists of the notion of *laesio enormis* (literally, "enormous damage"), an extreme or unacceptable (economic) damage done to the seller, if the sale price is less than half the just price. In such a case, the contract is annulled, unless the seller agrees to pay the full (just) price. This legal limitation on free negotiation and exchange was reinforced by the Christian and patristic idea that negotiation necessarily involves lying, and is therefore morally wrong, as well as the more general idea that cupidity and greed are sinful for Christians.³⁸ As a result, there are, in Byzantium, two conflicting ideas regarding just price and price formation: one that is based on free negotiation and one that puts moral and eventually social constraints on negotiation, so that extreme damage to individuals may be avoided. The very notion of *laesio enormis* presupposes and rests upon the following concepts: a concept of the just value, which is independent of the specific negotiation; an acceptance of free negotiation as establishing the actual price; a limitation placed upon free negotiation when the sale price is under half the just value of a commodity.

In Byzantium, free negotiation coexisted with the limits mandated by ideas of justice. The limitations deriving from the concept of *laesio enormis* are primarily evident in land sales and labor contracts, and were in practice most visibly in the middle period, to be weakened in the Palaiologan period and even earlier. The legislation of the Macedonian emperors on land sales to the *dynatoi* had, as one of its legal bases, the protection afforded the seller by the *laesio enormis*, whose effects were extended beyond their original and rather limited intent. This is quite clear in the novel of Romanos I

³⁶ The main texts are *CI* 4.46.2, 4.44.2, 4.44.6, 4.44.8 = *Bas.* 19.10.78 (77); see also *CIC*, *Dig.* 4.4.16, no. 5; cf. M. Kaser, *Das römische Privatrecht*, 2 vols. (Munich, 1975), 2:388–90. On the *laesio enormis* in Byzantium, see E. Papagianni, 'Η νομολογία τῶν ἐκκλησιαστικῶν δικαστηρίων τῆς βυζαντινῆς καὶ μεταβυζαντινῆς περιόδου σέ θέματα περιουσιακοῦ δικαίου (Athens, 1992), 1:70; cf. A. Sirks, "La *laesio enormis* en droit romain et byzantin," *Tijdschrift voor Rechtsgeschiedenis* 53 (1985): 291–307, whose discussion differs from mine on several points.

³⁷ J. W. Baldwin, *The Medieval Theories of the Just Price* (Philadelphia, 1959), 9–10 and *passim*.

³⁸ Sirks, "Laesio enormis," 304, considers that the limit of the half price was established by pre-Justinianic commentators and owes nothing to Christian ideas.

issued in 934 that states, among other things, that if the sale price of land acquired after the famine was less than half the just value (δικαία ἀποτίμησις), the sale was annulled and the buyer lost the money he had paid. If the sale price was not quite that low but nevertheless resulted in great harm (περιγραφήν καὶ βλάβην) to the seller, the sale was still annulled, although the buyer had the right to recover the money he had paid.³⁹ In the same period, a protection similar to that of the law regarding the *laesio enormis* was extended to laborers who made contracts regarding their wages. If it was found that the negotiated and agreed upon wage was less than the just wage, then the contract would be annulled and the work evaluated; if the negotiated wages were higher than that, the contract remained valid.⁴⁰

Therefore, in the middle Byzantine period the freedom of negotiating prices and wages was assumed, but it was also tempered by the intervention of the state acting in the interest of social and economic justice, and on the basis of the idea of just value and just price. Beginning with the eleventh century, there was considerable attenuation of the protection afforded by the laws on *laesio enormis*. Thereafter, echoes of this protective legislation are mostly found in formulas in sale contracts, where the seller renounces the protection, and even in sales agreements (all of the extant examples concern the sale of land), where it is specifically stated that if the land is worth more than the price paid for it, the remainder constitutes a donation. The documentation is clearest for the thirteenth century and later; by that time, free negotiation had become paramount in establishing the sale price, and intervention on behalf of economic justice had been reduced. By that time also, and in a process that began probably in the eleventh century, the just value and the just price had become identical with the market price, despite the voice of moralists who occasionally complained about this phenomenon.⁴¹

Ideas regarding the profit of the merchant were based on similar general premises and followed a similar evolution. In the middle Byzantine period, the prevailing ideology admitted a legitimate profit for the merchant, profit conceived as the reward of his labor and recompense for the risks he ran in the exercise of his trade, that is, a cost-plus-labor theory of profit and, by extension, of price.⁴² But the other side of this position is the equally firm belief that there is just and unjust profit, and that profit of any kind has certain legitimate levels, which it should not exceed. Profiteering, taking advantage of the misfortune of others—for example, by selling grain at very high prices in times of famine, or buying land at excessively low prices in hard times—was condemned and unlawful; so was stockpiling, especially of foodstuffs, and hoarding of

³⁹ Svoronos, *Novelles*, Novel 3, chap. 5.3.

⁴⁰ *Das Eparchenbuch Leons des Weisen*, ed. J. Koder (Vienna, 1991), 22.3.

⁴¹ See Laiou, "Byzantine Economic Thought."

⁴² See, for example, J. B. Pitra, *Juris ecclesiastici graecorum historia et monumenta*, 2 vols. (Rome, 1864–68; repr. 1963), 2:323–24. On the value placed on labor, see also the peculiar justification, by John VI Kantakouzenos, of a heavy tax placed on merchants who bought from the peasants and imported foodstuffs into Constantinople, because, among other things, "they make great profit from the work of others without exertion": *Ioannis Cantacuzeni Eximperatoris historiarum libri quattuor*, ed. I. Schopen, 3 vols. (Bonn, 1828–32), 3:80–81 (hereafter Kantakouzenos), ἀμογητὶ ἐκ τῶν ἑτέρων πόνων αὐτοὶ πολλαπλασίω τὰ κέρδη φέρονται.

commodities with a view to raising the price and acquiring unreasonable profit (παράλογον κέρδος).⁴³ This was the firm position of church and state during the middle Byzantine period and into the eleventh century. Quite aside from the fact that profits deriving from stockpiling commodities, or from fraudulent practices, were illegal, the just profit was considered to be not what the merchant could gain in the course of a free negotiation, but, rather, something that was subject to noneconomic constraints and regulations. A canon attributed to Patriarch Nikephoros I (806–815), but whose attribution is insecure, states clearly that the just profit is 10% (it is not clear whether this is calculated on the purchase price or on the purchase price plus expenses).⁴⁴

In the *Book of the Eparch*, the rates of profit are legislated by the state in the case of the butchers, the fishermen, the bakers, and the grocers. The price of wine is to be established between the tavernkeepers and the eparch, proportionately to the purchase price. While the rates of profit permitted to the various guilds by the *Book of the Eparch* vary, the general idea is clear: maximizing profits by taking full advantage of the forces of supply and demand is not permitted. Thus, although there is no price regulation in the *Book of the Eparch*, there is certainly regulation of profit, at least in Constantinople where the provisions of this text were applied.⁴⁵ As has already been suggested elsewhere, the result was that merchants could maximize their profit primarily by increasing the volume of their transactions, not by taking advantage of fluctuations in supply and demand.⁴⁶

If, in the tenth century, just profit had been conceived as having a value independent of the bargaining mechanism, by the late eleventh century there are indications that the idea of free negotiation was gaining ground. A greater degree of freedom crept into economic exchange, and the noneconomic view of just profit was attenuated. It must be admitted that the clearest indications are to be found in practice rather than in ideological statements, although late eleventh- and twelfth-century commentaries on Aristotle's *Nicomachean Ethics* may provide an analytical and theoretical basis.⁴⁷ Indications may also be found in negative statements, whereas the only positive remarks as to the validity of any negotiated price come from the patriarchal court of the fourteenth century and concern land transactions.⁴⁸ By negative statements I mean asides such as that included in a letter by Tzetzes, in which he complains of monks who sell apples to the emperor at exorbitant prices—three to four pounds of gold for one apple or pear! This grotesquely exaggerated anecdote is followed by the statement that such

⁴³ On stockpiling and hoarding, see *Synopsis Basilicorum* P 24, with reference to *Bas.* 60.22 (or 69.6). Cf. *Eparchenbuch*, 10.2, as well as 11.3, 13.4, 16.5, 20.3. On thesaurization as a form of hoarding that leads to a decline in prices, cf. C. Morrisson, "Manier l'argent à Constantinople au Xe siècle," in *EYΨUXIA* (as above, note 9), 557–65.

⁴⁴ Pitra, *Juris ecclesiastici*, 2:323–24.

⁴⁵ On this and on state regulation in general, cf. Dagron, "Urban Economy," 410ff and passim, and N. Oikonomides, "The Role of the Byzantine State in the Economy," *EHB* passim.

⁴⁶ See Laiou, "Exchange and Trade," 735–36.

⁴⁷ Cf. *ibid.*, 745, especially the story from the *vita* of St. Auxentios. Cf. Laiou, "Byzantine Economic Thought."

⁴⁸ See, for example, *MM* 2:365.

practices would inflate the price of apples, with the result that the poor would die without tasting fruit.⁴⁹ The point is that Tzetzes is thinking of a world where prices are normally set in the marketplace, and where the emperor's misplaced generosity will play havoc with the normal functioning of the market. Similarly, as already pointed out, when Symeon the New Theologian speaks of the merchant's profit, there is no indication at all that he is thinking of a controlled "just" profit.

It is not surprising that there is a dearth of positive statements to the effect that the merchant's "just profit" would be what he could realize in an honest transaction, however high it might be, or that, by extension, the just price is reached through the mechanism of supply and demand. Such an overt statement would have run counter to a powerful ideology that continued to survive even after the tenth or eleventh century. One may see this ideology in the same letter of Tzetzes, well known and sufficiently commented upon, which shows that in twelfth-century Constantinople the expectation still was that the just profit of a fish vendor should be exactly that posited by the *Book of the Eparch*.⁵⁰ The ideology is also much in evidence in periods of crisis: for example, in early fourteenth-century Constantinople, when, in the midst of famine, the patriarch reminds the emperor that there is a just price and a just rate of profit, and demands state intervention in order to stop merchants from stockpiling grain and bakers from realizing extravagant profits.⁵¹ The ideology of justice in exchanges was powerful indeed, even after the just price had become equivalent to the market price.

In sum, then, in Byzantium there was always the coexistence of the ideas of free negotiation and social and economic justice; the latter was meant to moderate the effects of the former, but the weight of these two ideas varied according to the times, which is to say, the economic conditions, and to some extent according to whose voice is expressed by our sources. All of this suggests that price formation was the result of the interplay of these ideas, when they were put into practice; but there is no theoretical statement regarding price formation, except possibly in an undated commentary on the *Nicomachean Ethics*.

Any discussion of medieval economic thought must include the society's views on usury in its medieval definition, that is, lending at interest. The brief discussion that follows does not address the evolution of interest rates, which have already been discussed in other chapters.⁵² It is still necessary, however, to say a few words about the ideology and economic ideas underlying the Byzantine attitudes toward lending at interest. It is a particularity of Byzantium that it was the only state, both in the Muslim Near East and in western Europe, that permitted lending at interest; it also regulated the rates of interest. The fact is important, for the Byzantines disposed of exactly the

⁴⁹ *Ioannis Tzetzae Epistulae*, ed. P. A. M. Leone (Leipzig, 1972), ep. 57, pp. 78–80, 82 (hereafter Tzetzes).

⁵⁰ Tzetzes, ep. 57, pp. 81–82; G. Dagron, "Poissons, pêcheurs et poissonniers de Constantinople," in *Constantinople and Its Hinterland*, ed. C. Mango and G. Dagron (Aldershot, 1995), 70–73.

⁵¹ A.-M. Maffry Talbot, *The Correspondence of Athanasius I, Patriarch of Constantinople* (Washington, D.C., 1975), letter nos. 93, 100, 106.

⁵² See Laiou, "Exchange and Trade," 702–3, 726–27, 749–50; D. Gofas, "The Byzantine Law of Interest," *EHB* 1091–96.



1. Homily on the earthquake and Lazarus. "The wealth of the rich man [*on the right*] did not avail him when there was earthquake." The earthquake may be that of January 870 in Constantinople. National Library, Athens, cod. 211, fol. 87, Homilies of St. John Chrysostom (late 9th century) (after A. Marava-Chatzinikolaou and C. Toufexi-Paschou, Κατάλογος μικρογραφιών βυζαντινῶν χειρογράφων τῆς Ἐθνικῆς Βιβλιοθήκης τῆς Ἑλλάδος [Athens, 1997], 3: pl. 21)



2. Last Judgment: a civil servant in Hell. Church of St. George near Kouvaras in Attica, fresco, 13th century (after D. Mouriki, "An Unusual Representation of the Last Judgment in a Thirteenth-Century Fresco at St. George near Kouvaras in Attica," *Δελτίον τῆς Χριστιανικῆς Ἀρχαιολογικῆς Ἑταιρείας*, ser. 4, vol. 8 [1975–79]: pl. 88)

same texts, from the Old and the New Testament, on which the prohibition of usury in medieval western Europe was based. They also shared the same Aristotelian texts regarding usury. Necessarily, there was a certain suspicion of lending at interest, even in the minds of the Christian emperors who permitted it but who, since Constantine I, tried to regulate it in accordance with both economic principles (the highest permitted rates were, at first, those that applied to loans in kind, and always those on the high-risk sea-loans) and noneconomic ones, such as the status of the lender or of the borrower. This suspicion was voiced most strongly by ecclesiastics, especially the theologians or moralists, rather than the canonists.⁵³

The most common and most prevalent Byzantine position regarding the Christian and Old Testament prohibition of lending at interest was that it applied only to ecclesiastics. Laymen, therefore, could legitimately charge interest on loans. Lending at interest is given several justifications. One is that interest is equivalent to revenues from the item loaned, an economic argument.⁵⁴ Another is the simple and pragmatic argument that appears in a novel of Leo VI, which permitted once again interest charges, forbidden by his father, Basil I: no one would lend money unless they could charge interest.⁵⁵ A fourteenth-century justification, attributed to people whom the opponent of lending at interest wishes to confound, namely, that the law permitting interest is older than the one forbidding it, seems like a straw man, set up to be easily destroyed.⁵⁶ More interesting is the idea that the man (or woman, in Byzantine practice, but not in Byzantine perception) who lends money runs a certain economic risk.⁵⁷ Byzantine canonists, however, were convinced, as were their western counterparts, that simple loans carry no risk, and indeed made the absence of risk a defining element of a loan.⁵⁸ In the twelfth century, there was, apparently, a lively debate among churchmen as to the legitimacy of lending at interest for clerics (its legitimacy for laymen was assumed). We have only echoes of this debate and only a brief mention of an interesting economic argument in favor of usury: some argued that the borrower profits from a loan, and that the interest is the lender's share of the profits. Clearly applicable only to a productive loan, this argument would make a loan similar to a partnership, which, of course, was not forbidden by divine law; but we do not know how the full argumentation ran.

The opposition to lending at interest, while it rests on a larger theoretical basis, is

⁵³ On the 12th-century canonists, see Laiou, "God and Mammon." For a full discussion of Byzantine attitudes toward lending at interest, see eadem, "Byzantine Economic Thought." On this topic, see also Laiou, "Nummus."

⁵⁴ *Bas.* 23.3.34: οἱ τόκοι τάζειν ἐπέχουσι καρπῶν (= *CIC*, *Dig* 22.1.34: "usurae vicem fructuum optinent").

⁵⁵ *Les Nouvelles de Léon VI, le Sage*, ed. P. Noailles and A. Dain (Paris, 1944), Novel 83. On the dating of the pertinent legislation, I am following T. E. van Bochove, *To Date and Not to Date: On the Date and Status of Byzantine Law Books* (Groningen, 1996), who has revised A. Schminck's revision of the dating of the legal compilations of the Macedonian emperors. Gofas, "The Byzantine Law of Interest," follows Schminck's dating.

⁵⁶ Nicholas Kabasilas in PG 150:740–44.

⁵⁷ R. Guiland, "Le traité inédit 'Sur l'usure' de Nicolas Cabasilas," in *Εἰς μνήμην Σπυρίδωνος Λάμπρου* (Athens, 1935), 276.

⁵⁸ Laiou, "God and Mammon," 273.

not very sophisticated. In essence, it appeals to divine law, which unequivocally condemned lending at interest.⁵⁹ The most powerful idea, which runs through the centuries, is that usury is *pleonexia*—avarice, which is a sin—or *aischrokerdeia*, dishonest gain. An economic objection to lending at interest, namely, that usury is the appropriation of the property of others, that it is, in fact, theft, is not fully developed by the twelfth-century canonists and reappears as a banal phrase in the fourteenth century.⁶⁰ In the fourteenth century also there is the statement that the usurer appropriates the results of the labor of others in order to increase his own wealth.⁶¹ The interest of this position lies above all in the fact that it underlines the importance accorded by the Byzantines to labor as the legitimate source of wealth.

While, then, the predominant position was that lending at interest, at controlled rates, was legitimate for laymen, there was also a rigorist trend that saw usury as a contravention of divine law, and therefore to be condemned. The rigorists were most vocal during two different periods, first in the period just after the first phase of Iconoclasm, when two patriarchs, Tarasios and Nikephoros I, extended the usury prohibition to laymen, a position briefly adopted in the civil legislation by Basil I.⁶² The second period of vocal opposition to lending at interest began in the 1340s, a time of acute social tension and economic instability. It was undoubtedly based on the same concerns for social and economic justice that lie behind the idea of the just price, which also, as we have seen, witnessed a resurgence somewhat earlier in the fourteenth century, equally a time of crisis.⁶³

Real interest rates, as has been noted earlier,⁶⁴ remained stable for a long time, from the reign of Justinian until the eleventh century, except for small technical adjustments and for an early increase in the interest rate on sea-loans, which rose from 12% to 16.67% in the early ninth century. Grain prices also exhibit stability from the ninth century certainly through the tenth, and possibly until the late eleventh; after that, and until the late thirteenth century, the information is sporadic and inconclusive. Land prices, too, appear relatively stable from the tenth century to the end of the thirteenth.⁶⁵ This long-term stability may be due to real factors. In the case of interest rates, which are always closely connected with the rate of profit, it may be that they

⁵⁹ Thus, for instance, the canon of Patriarch Nikephoros I, in Pitra, *Juris ecclesiastici*, 2:322–23.

⁶⁰ It is presented by Zonaras in his commentary on canon 5 of the council of Carthage: Rhalles and Potles, *Σύνταγμα*, 3:306–9. For the 14th century, see *Theoleptos of Philadelphia: The Monastic Discourses*, ed. R. E. Sinkewicz (Toronto, 1992), no. 16.

⁶¹ Kabasilas in PG 150:723.

⁶² See Laiou, “Exchange and Trade,” 710.

⁶³ At the end of the 14th century, when the situation in Constantinople was just about desperate, the patriarchal court occasionally disallowed the payment of interest, even though it had been freely agreed upon: Laiou, “Church,” 455–56.

⁶⁴ Laiou, “Exchange and Trade,” 710, 757.

⁶⁵ See C. Morrisson and J.-C. Cheynet, “Prices and Wages in the Byzantine World,” *EHB* 818–21. In my view, the data on land prices are not very trustworthy, since in many of the recorded transactions special factors intervene: sometimes the land is klasmatic, with a low price; at other times, indeed quite frequently, acts of sale are in fact acts of sale and donation combined, or the sale is made to a powerful person who can impose a low price.

remained stable because in a traditional, agricultural society, profit rates change very slowly. In the case of grain prices, the price stability may reflect a long-term stability of the technical conditions of production and a parallel upward swing, after the tenth century, in population size and production: thus increased supply would have kept up with increased demand, resulting in price stability.⁶⁶ In both cases, however, ideological factors may well have played a role as well. Interest represents the minimum returns on the exploitation of capital; the long-term stability of interest rates may suggest that there was a concept of the “just profit” of capital, just as there was a “just profit” for merchants. This would explain why, when interest rates increased in the eleventh and twelfth centuries, people still used older language that made it seem that the rates had not changed.⁶⁷ As for the price of grain, it may well be that the stability due to real factors eventually became a social standard, that is, that there was an expected price that people held dear, although with fluctuations and perturbations in supply and demand at the margins.⁶⁸ It is, in other words, a distinct possibility that the concepts of just profit and just price influenced, to some extent, the behavior of prices and interest rates. Price instability after the thirteenth century occurred in a period when the ideological constraints had become significantly attenuated.

Although the economic thought of the Byzantines has to be reconstructed from disparate and fragmentary materials, we do possess a sustained discourse on economic matters dating from the last decades of the existence of the empire. It consists of George Gemistos Plethon's ideas on political economy, which were incorporated in his Address to Theodore II Palaiologos, despot of the Morea, and the Address to Manuel II Palaiologos, the latter written shortly after 1417–18.⁶⁹ Plethon's purpose was, primarily, to help restore the economic fortunes of the Peloponnese so as to permit the peninsula to defend itself, and indeed to become the springboard for a Byzantine counterattack against the Turks. Insofar as economic thought is concerned, his proposals reflect Platonic ideas, some traditional Byzantine ideology, some impulses from current economic conditions, and some novel syntheses that constitute the original part of his work. Whereas he was not writing a systematic treatise either on economics or on political economy, his description of the economic and fiscal measures he deemed

⁶⁶ See Morrisson and Cheynet, “Prices,” 830.

⁶⁷ For example, in the *Peira* (19.1, Zepos, *Jus*, vol. 4), it is said that the *patrikios* set the legal interest rate at 8, 6, and 4 nomismata *per pound of gold* (i.e., per 72 nomismata), which nicely preserves the Justinianic scale of 8, 6, and 4, although the Justinianic rates are *percentages*, and therefore, lower.

⁶⁸ If, at a certain point, the controls on profits in Constantinople were relaxed, it was still possible for the merchants to increase their profits, in an environment of stable prices, by reducing costs.

⁶⁹ Sp. Lambros, *Παλαιολόγεια καὶ Πελοποννησιακά*, vol. 4 (Athens, 1930), 113–35; vol. 3 (Athens, 1926), 246–65. Some of his ideas are incorporated in a letter to Manuel II regarding the Isthmus of Corinth: *ibid.*, 3:309–12. For English summaries of these texts, see C. M. Woodhouse, *George Gemistos Plethon: The Last of the Hellenes* (Oxford, 1986), 92–107. On Plethon's economic thought, extensive work has been done by S. P. Spentzas; see his *Αἱ οἰκονομικαὶ καὶ δημοσιονομικαὶ ἀπόψεις τοῦ Πλήθωνος* (Athens, 1964). For Bessarion's views, which have substantial differences from those of Plethon, see L. Mavromattis, “Ο Καρδηνάλιος Βησσαρίων καὶ ο ἐκσυγχρονισμός της Πελοποννήσου,” in Μνήμη Δ. Α. Ζακυθηνού (= Σύμμεικτα 9.2 [1994]), 41–50.

necessary does constitute a coherent whole. In what follows, the focus of attention is on Plethon's ideas rather than on the specific realities of the Peloponnese, to which these ideas were a response.

Plethon carried the Byzantine concept of autarky to a macroeconomic level. The state should, in his view, which derives from Plato, be self-sufficient, and, he thought, it had the wherewithal to achieve that goal. Self-sufficiency would be achieved partly through sumptuary restrictions, partly through the prohibition of exports, and partly through punitive tariffs when exports were allowed. Agricultural exports in particular (which, according to Plethon, were in any case the most important resource of the peninsula) could be exported only to friendly foreign states, with a tariff of 50% *ad valorem*. What the state needed that it did not itself produce (especially iron and weapons) should be imported through a barter system, which Plethon greatly favored over the use of money in foreign exchanges.⁷⁰ He perhaps shows an understanding of the relative worth of the commodities to be exchanged, since he mentions cotton (more expensive than wheat) as a barter item for iron and weapons. There is a slight modification of the insistence on national autarky in the statement that it is necessary to import and to export some items. He intended to regulate international exchange through a customs policy, which would admit the free entry of necessary imports and would tax very heavily the export of items that should rather remain within the borders. However, the main thrust of his proposals is for a self-sufficient state and minimal use of money.

Within the national economy, Plethon sees agriculture and animal husbandry as the main sources of wealth, indeed the only ones worthy of much discussion. His basic ideas have honorable ancient and medieval pedigrees, although they lead to some novel propositions. That agriculture and the security forces (the army) are of paramount importance and are interdependent⁷¹ is an idea that imbues Xenophon's *Oeconomicus* and reappears in Byzantine texts such as the *Taktika* of Leo the Wise. Plethon's tripartite division of society into those who labor (in the fields), those who provide services, including merchants, artisans, and manual workers, and those who rule goes back to Plato and is a variant of the medieval division into those who fight, those who pray, and those who work the land; in all cases, agriculture is seen as paramount.⁷²

What is novel is Plethon's division of the factors of production into three elements: labor, the means of production (oxen and other cattle, flocks, vineyards), and the element of security, provided by the army and the administration, including the emperor. Plethon sees all three as essential factors of production, and indeed so they were: political/military protection of the agricultural producers had been considered as the counterpart of the peasant's contribution of produce ever since Xenophon, and the need of

⁷⁰ Lambros, *Παλαιολόγια*, 4:124–25; 3:262–63.

⁷¹ *Ibid.*, 3:253–54.

⁷² *Ibid.*, 4:119–20; H. Beckh, *Geoponica sive Cassiani Bassi scholastici De re rustica eclogae* (Leipzig, 1895), 2.

protection must have been more than ever evident in the insecure conditions of the early fifteenth century. The high value placed on agricultural capital and its providers is a recognition of its importance, as also of the fact that in late Byzantium the owners of capital could be different from the owners of land and/or from the peasants.⁷³ According to Plethon, the owners of capital should have a share in the final product equal to that of the agricultural workers.

The importance of these three factors of production is seen in the fiscal policy proposed by Plethon. The origin of taxes, he thought, lay in the contribution of the community to those who had been entrusted with guarding and protecting it.⁷⁴ In his own proposals regarding taxes, however, he uses the terms connoting taxation loosely, to include reward for labor, rent for the means of production, and contributions to those who provide security. He was against multiple taxes, proposing a single and simple tax. He was also against labor services and against a tax across the board, considering the first as servile and the second as unfair, which indeed it is, constituting as it does regressive taxation.⁷⁵ A proportional payment in kind is what he considered to be fair taxation. His system was simple: after the seed corn had been laid aside (and the flocks had been replaced), the rest of the production should be divided into three equal parts. One part would be reward for labor, one part would be rent for (or reward for owning) the means of production, and the third portion would be the tax properly speaking, given over to the soldiers and the ruling class, including the emperor.⁷⁶ The soldiers, the members of the ruling class, and even the members of the high secular clergy (but not the monks) were to be assigned one or more peasants, designated by the unfortunate term "helots," from whom they would get their sustenance. The pertinent passage, being particularly representative of Plethon's views, is here quoted in full.⁷⁷

The first thing I say has to be corrected is that it should not be the same people who pay taxes and serve in the army, but that first all the Peloponnesians must be divided into two parts, the ones who serve in the army and those who pay taxes, depending on each person's suitability. Those who are to serve in the army must be freed of all taxes, and their food supply must be procured; the taxpayers must be relieved of all army service, and they must not, as they do now, pay small sums to many people, nor must they pay in coin, for in this way collection becomes exceedingly irksome both to those who collect and to those who pay. The tax must be paid in one form, and in kind, and one person must collect from each, and the tax must be so much and such as will seem just, and sufficient to [our] affairs, and also will seem most light to the payers themselves.

I will state which tax will come closest to achieving all of these things. The fruits of the labor of each person belong, I think, to three [groups] according to justice:

⁷³ Cf. A. E. Laiou, "The Agrarian Economy, Thirteenth–Fifteenth Centuries," *EHB* 334–36.

⁷⁴ Lambros, *Παλαιολογία*, 4:120.

⁷⁵ On this, cf. Laiou, "The Agrarian Economy," 337–38.

⁷⁶ Lambros, *Παλαιολογία*, 4:123–24, and the longer and more elaborate passage in 3:254–56.

⁷⁷ *Ibid.*, 3:254–56.

one to him who has done the work, the second to him who helps production by providing the means for it [τέλη: capital resources], and the third, to him who procures security to all. The workers are the tillers, the diggers, the shepherds; the means of their labor are the oxen, vineyards, flocks, and any other such things, and those who procure the common security are those who serve in the army and endanger themselves for the community, and the *archontes* and those who are in charge of various aspects of the common affairs, and who preserve each thing, great and small; the emperor is at their head, who is in charge of everything, and preserves and directs everything. If any of these things should lack, the others cannot benefit at all; but first there must be the workers, then they must have the means for their work, and also those who guard them, if there is to be a benefit. For this reason I say that the fruits of the labor of each must be distributed in three parts, whether they consist of wheat, wine, oil, cotton, or the proceeds of pasture, milk, wool, or any other similar things. The products must be calculated, for the tillers after the seed corn has been set aside, and for the shepherds after the old [flocks] have been replaced; then, one part will go to the worker, one for the means of the labor, and the third to the fisc. He who works with his own capital resources will receive two portions, while the third will go to the fisc; he who received the resources from public officials will work for one-third, or for whatever is agreed upon that will not diverge significantly from what is just; and he who works with shared capital resources will receive one-half;⁷⁸ and none of them will pay anything else of any significance.⁷⁹ We might call those who pay this tax “helots,” for, being relieved of army service, they have been assigned to the payment of taxes. And it is necessary to consider them the common food providers and not to collect anything other than this tax, not for any person, nor should it be allowed to anyone to use [helots] for labor services; rather we must treat them very well and not do any injustice to them in anything.

We may note a few salient similarities and differences with the economic thought of earlier periods. For one thing, the special category of *autourgia* has disappeared from the schema. Vineyards, hardly a means of production, are placed in the same category as oxen, while no mention is made of agricultural implements. Mills, ovens, and other investments in secondary agricultural production have disappeared from consideration. For fiscal purposes, the only taxable resource is primary agricultural and pastoral production. Most importantly, land has disappeared as an economic category, for Plethon thought that, according to natural law, land should be considered a common good, available to anyone and everyone who was capable of cultivating it.⁸⁰ This surprising idea had, indeed, some precedents in Byzantine thought, as in that of the ancient Greeks and Romans, as well as that of the fourth-century church fathers. Gregory of Nazianzos, for example, thought that private property was the result of the Fall of

⁷⁸ I.e., one-third of the product for his labor, plus one-sixth as recompense for his part ownership of the means of production, which indeed adds up to 50% of the total production.

⁷⁹ I read δὴ instead of μὴ in line 17, p. 255.

⁸⁰ Lambros, *Παλαιολόγεια*, 3:260: τὴν γῆν ἅπασαν ὥσπερ ἴσως ἔχει κατὰ φύσιν κοινὴν ἅπασιν τοῖς ἐνοικοῦσιν εἶναι, ἀντιποιεῖσθαι δὲ μηδὲνα ἰδίᾳ χωρίου μηδενός.

man.⁸¹ Here, however, it is presented as a recipe for the present and the future, not as a description of an original or primitive state of affairs. Plethon's concept of the land as available to the person who could till it, that is, his concept of the use value of land, is indeed original in the Byzantine context. It also underlines the great value he gave to labor. In this, he was in concert with the earlier Byzantine views on labor.

The economy envisaged by Plethon was closed, highly dependent on agriculture, protectionist up to a point, and for all intents and purposes a natural economy, with very little use for money. It is to be expected that in this system manufacturing and the economy of exchange played a minor role. Artisans are called τὸ δημιουργικόν, for they create things that did not exist before. Merchants are necessary because they exchange goods between places that have a surplus and those that have an insufficiency: a good ancient idea that the merchant is useful to the city because he can provide the necessities a city lacks. For the rest, the merchant's job does not appear in a good light: Plethon talks of the διακονικόν that preys upon the poor peasants, by using false weights, and in other ways.⁸² Finally, he repeats old views that the *archontes*, the ruling élite, should not engage in trade or manufacturing: if they are already practicing a trade, they should choose between it and the prerogatives of social class. This is very much the position embraced by both Alexios I and theorists of the twelfth century, who tried to impose on society and on economic activity a rigid and closed hierarchy.⁸³ For, indeed, Plethon does not restrict his prohibition to the *archon*/merchant; rather, he envisages a society where the division into three classes—those who work, those who provide services, and the rulers/soldiers—would be rigidly maintained.

In sum, Plethon's ideas are of interest primarily for a study of political economy. As far as economic thought is concerned, his concept of the use value of land, the factors of agricultural production, and of the value of labor are notable. Other important topics, such as the just price, or just profits, or the legitimacy of lending at interest are not treated or even implicitly inherent in his writings, which is understandable given his basic premises. He does understand the effect of customs duties on exports, but the administrative solution he proposes for the relevant problems is rather rough and ready, and the tariff of 50% ad valorem is based on a noneconomic argument: "commodities should not be exported except if the foreigners are in no less than double the need of the citizens."⁸⁴ The original parts of his conception of the economy of the Peloponnese must be seen as idiosyncratic rather than representative, for we can find few parallels to them either in the statements or in the actions of his contemporaries.

⁸¹ For a brief summary, see O. Langholm, *Economics in the Medieval Schools* (Leiden, 1992), 72–73. For the views of Symeon the New Theologian, see Krivochéine and Paramelle, *Syméon le Nouveau Théologien*, *Catéchèses* 2:110–12. Cf. note 30 above.

⁸² Lambros, *Παλαιολογία*, 4:132.

⁸³ Laiou, "God and Mammon," 285ff.

⁸⁴ Lambros, *Παλαιολογία*, 4:124: ὥς οὐκ ἂν ἄλλως ἐξαχθισομένους ἢ εἰ ἐν μὴ μείονι ἢ διπλασίᾳ χρειᾷ οἱ ξένοι εἶεν τῶν πολιτῶν. It is noteworthy that John VI had found it necessary to levy duties on foodstuffs imported into Constantinople: Kantakouzenos, 3:80–81.

Nor does the fact that this is the only extant explicit treatment of economic questions mean that Plethon's discussion was sophisticated: what he advocated was a very simple economy, in an increasingly complex world, and the ideas he presented were, to that degree, limited.

The utopian aspect of Plethon's ideas is quite uncharacteristic of Byzantium, where, as we have seen, economic thinking derived in part from Roman law, in part from the effort of the state to find a balance between freedom of action and social/economic justice, and in part from the free-market practices that become clearly evident in the eleventh century and after. In turn, these latter practices are reflected and may have found partial theoretical justification in the commentaries on Aristotle, which proliferated in the same period and into the fourteenth century. Aristotle's concept of justice in the economy permits different interpretations: both an exegesis that would lead to the labor-cost theory of value and one that would make it dependent on demand. The western scholastics developed both these possibilities; the Byzantine commentators who preceded them, and who were much admired by the westerners, also came close to a demand theory of value, an alternative to the labor-cost-risk idea of price formation that is implicit in texts of the earlier period.⁸⁵ A sustained analysis of the commentaries is an important desideratum for the further study of the economic thought of the Byzantines, which is much more subtle and complex than has been recognized.

⁸⁵ Laiou, "Byzantine Economic Thought."

The Byzantine Economy: An Overview

Angeliki E. Laiou

The Development of the Economy over Time

Retrenchment and Reorganization (Seventh through Early Ninth Century)

In the course of the seventh century, the Byzantine Empire found itself in a full-blown crisis, demographic, political, and economic.¹ The crisis had already begun, on all fronts, in the second half of the sixth century, in great part because of the plague and its devastating effects on the demography. These were reinforced by political and military factors, as well as by the fact that the earlier demographic growth had caused a degradation of the landscape.² The empire, which had reached a high level of prosperity during the reign of Justinian I, was a very different state and economy in the middle of the seventh century. Some of the richer areas had been lost, while the others remained under virtually constant attack. It has been suggested that the military crisis itself was due to the plague, which undermined the possibility of resistance to Slavic, Avar, Persian, and, eventually, Arab attacks.³ The crisis was of long duration, lasting until the late eighth century. Labor scarcity in the countryside resulted in a decline in production. The cities retracted in terms of territory, declined in terms of population, and changed their functions, which became linked primarily with security, the transfer of fiscal revenues, and local or regional exchange. Trade and exchange, while they continued, certainly suffered from the decline in production, the general insecurity, and the breakdown of communications over large areas. Monetary circulation became sluggish, and the presence of bronze coins in the provinces is so exiguous as to be virtually nonexistent from the 660s until the early ninth century. Monetary exchanges with areas outside the political frontiers were in significant part noneconomic. The fiscal system was only partly monetized, with taxes collected mostly in kind until 769,

¹ Much of what follows is based on the preceding chapters. Cross-references will be made only when it is not self-evident from which chapter the relevant information is drawn. The synthesis and conclusions are my own and do not bind the individual authors.

² See B. Geyer, "Physical Factors in the Evolution of the Landscape and Land Use," *EHB* 42ff.

³ R. Hodges and D. Whitehouse, *Mahomet, Charlemagne et les origines de l'Europe* (Paris, 1996), 9.

while the army was reorganized in ways that obviated or greatly reduced cash expenditure.

The situation, however, was not as grim as other scholars have suggested, nor did the darkest days last as long. There was, for one thing, Constantinople, greatly reduced in population, to be sure, yet still a center of local, regional, and international trade, whereas smaller centers, such as Thessalonike, Ephesos, Venice, Kherson, Mesembria, and Monemvasia, all, in one way or another, frontier towns or close to the frontier, played a similar role. There were areas of relative prosperity, namely, southern Italy and especially Sicily. The island produced grain and pottery, which it exported to southern Italy. The measures of Leo III, who imposed a poll tax on these areas and transferred certain revenues to the fisc, may reflect this relative prosperity.⁴ There were also resistances and transformations, which allowed the economy to overcome the crisis and, when external factors also improved, to expand. Three salient points may be made here. The first is the importance of the state, whose integrative role in the economy persisted until the eleventh century. In the period of crisis, the state recognized and reinforced the reorganization of the economy around agriculture. The effects of the shortage of labor were mitigated by the increased role of hereditary lease contracts. The state structured the command economy, whereby a very considerable part of the surplus (in proportions that varied with time) was appropriated by the state and redistributed in the form of salaries, a system that facilitated monetization in the countryside. In what is perhaps the first sign of impending recovery, the state ordered the payment of taxes in cash, already in 769. Almost fifty years earlier, Leo III had reintroduced silver into the coinage. The simplification of the copper coinage in the eighth and ninth centuries afforded flexibility to the monetary system. It was the state, too, that gave normative force to an ideology that aimed at minimizing social friction by introducing the idea of justice in exchange, which was to have a long future.

The second point is that, nevertheless, we are not dealing with a state that exercised full administrative control over economic life or, even less, that monopolized economic activity. There was, rather, a combination of state action and individual entrepreneurship in regard to the important commodities—grain and silk—while the rural economy was in the hands of smallholders, and the economy of exchange in the hands of sea captains, sailors, and traders.

The third point is that everything became much smaller in the course of these centuries. If the duality of village and estate is a constant feature of the Byzantine, indeed of the Mediterranean, countryside, the importance of estates in this period declined relative to that of villages. Cities became small; ports became small, and so did ships. The trade carried out in them was relatively small-scale, but well regulated by a law code that seems to derive some of its provisions from the experience of the sailors, a hypothesis that would explain its longevity. Investments and profits were also undoubtedly small.

An important observation that emerges from the preceding chapters is that, remarkably, glimmers of a turnaround, though not yet a takeoff, can be seen in virtually every

⁴ I am grateful to Cécile Morrisson for this comment.

major economic activity, and they cluster around the end of the eighth century and the beginning of the ninth, the 820s being a convenient point of reference. The indications are less clearly visible in agriculture, yet an improvement in agricultural production must have been there, and an increase in population must have begun in the second half of the eighth century and can be posited for the ninth century. The fiscal system was reorganized under Nikephoros I and became more efficient; monetary circulation shows signs of expansion after the 820s, especially in the Balkans, although less so in Asia Minor; trade, also, seems to have picked up in the early ninth century, and the revival of the cities took place in the ninth century and after. It has to be remembered that the last great outbreak of the plague, and a severe one, was in 747. To the extent that the recurrences of the disease had acted as inhibitors, through the reduction of the population, it is indeed remarkable that recovery, although still fragile, came so early. This fact, combined with the simultaneity of the recovery in various sectors, may be due first of all to the persistence, although at a low level, of monetization and exchange, even of some urban structures, and, second, to a restructuring of the economy that was overall successful. Certainly, one should not suggest that the restructuring was flawless and every measure appropriate: the repeal, by Nikephoros I, of some of the fiscal measures of Empress Irene suggests the contrary, and his own measures regarding lending at interest are neither perfectly coherent nor optimal.⁵ But overall, the economic and fiscal restructuring was successful and resulted in the beginnings of a virtuous cycle, in economics as in politics.

The Period of Expansion (Early Ninth to Late Twelfth Century)

As one might expect, this long period of expansion does not exhibit the same traits throughout, nor did all economic indicators reach the same point in their development at the same chronological moment. Some factors of production are characterized by a long-term upward swing throughout this period and beyond it: such is the case of population. On the other hand, there are important differences within this period with regard to both rate of development and structure.

Sustained and Restrained Growth (Ninth–Tenth Centuries) The Byzantine economy entered its expansionary phase much earlier than western Europe.⁶ The upward population trend was an important motor factor, as was generally the case in medieval econo-

⁵ For these measures, see A. E. Laiou, "Exchange and Trade, Seventh–Twelfth Centuries," and D. Gofas, "The Byzantine Law of Interest," *EHB*.

⁶ P. Toubert, "Byzantium and the Mediterranean Agrarian Civilization," *EHB*. According to Ph. Contamine et al., *L'économie médiévale* (Paris, 1993), 139, the chronological development of the western European economy was as follows: Late 7th–8th century: first faint signs of economic and demographic growth in northwestern Europe, followed by some reverses and new signs of growth in the mid-9th to mid-10th century. In Italy, the first signs of recovery come after 850. Mid-10th to early 14th century: period of significant growth. Late 11th century: creation of new commercial circuits and increase in the monetary stocks. The 1180s to early 14th century: great expansion. Mid-14th to mid-15th century: crisis. The authors stress that economic growth had neither the same intensity nor the same chronology in every part of western Europe.

mies based on agriculture.⁷ The point has been sufficiently developed in several chapters of this book, and need not be rehearsed again here. The cultivated areas expanded, as did agricultural production. Whether productivity also rose is less easy to determine, although there are indications that there was improvement here too.⁸ In any case, the supply of goods seems to have kept up with increased demand, which undoubtedly is a factor both in the absence of frequent or sustained famines after the mid-tenth century and in the price level of cereals and land, at least after the price of cereals had suffered an increase from the sixth to the ninth century. Cities had begun to expand again in the late eighth century, and the revival continued in an accelerated fashion through the twelfth century.⁹ The increase of population, the rising proportion of urban dwellers, the increase of production, and the contribution of the state in the form of greater security all stimulated trade, which was active in the ninth and tenth centuries, again following an upward curve that was to continue in the subsequent period.

Constantinople functioned as a great entrepôt of international trade, without losing its importance as a regional and interregional center. Because of the wealth concentrated within its walls, and the effects of the fiscal system, it played the role of integrating the economy of the state. Other urban centers were instrumental in integrating the economy of their region; such is the case of Thessalonike. Provincial cities began to flourish as well. Professional merchants become visible; in Constantinople some of their activities were regulated, but in the provinces they were not, and Byzantine provincial merchants did travel. The image dominant in earlier literature, of the indolent merchant sitting comfortably and waiting for the government to bring him traders and their merchandise from the outside world, is a false one. Important commodities, namely, grain and imperial silks, were subject to imperial interference, and the production of imperial silks took place in imperial workshops, for the most part. Manufacturing began to flourish: most of the information comes from Constantinople, but there is ample evidence from Thessalonike, perhaps Thebes, and places as far away as Kherison. Within Constantinople, the government sought to ensure provisioning and avoid excessive price fluctuations. This meant regulating the mechanisms of certain segments of artisanal production as well as setting a ceiling on the profits of some, at least, of the merchants. As G. Dagron has shown, another important aim of the government was to avoid excessive fragmentation of production and sale as well as the creation of great financial blocks, which would have come primarily from the aristocracy.¹⁰

The economic system in the tenth century has an outward aspect of equilibrium. This is, perhaps, because the command economy was functioning well and served to create or support a system that appears well integrated. The development of the coun-

⁷ D. C. North and R. P. Thomas, *The Rise of the Western World: A New Economic History* (Cambridge, 1973), 10, 25, 35. Cf. also C. M. Cipolla, *Before the Industrial Revolution: European Society and Economy*, 3d ed. (New York, 1993), esp. 3–5, 123ff. For an up-to-date history of the western medieval economy, see Contamine et al., *L'économie médiévale*.

⁸ J. Lefort, "The Rural Economy, Seventh–Twelfth Centuries," *EHB* 271–75, 298–99, 307–8.

⁹ Ch. Bouras, "Aspects of the Byzantine City: Eighth–Fifteenth Centuries," *EHB*.

¹⁰ G. Dagron, "The Urban Economy, Seventh–Twelfth Centuries," *EHB*.

tryside and the agricultural economy were in the hands of free peasants organized in villages. It has been shown that the village was functioning as a managerial unit in the rural economy and was well adapted to an economy that still had relatively low human resources and was going through a period of relatively slow-paced development.¹¹ The state drew its resources, in the form of taxation, primarily from the peasant population. It therefore tried to protect the free peasant and prevent the expansion of the large estate; at least, most of the state's actions went in that direction, although there were exceptions. Collecting the tax in gold, the state also paid out in gold the salaries of a large and well-functioning bureaucracy, as well as its other expenditures. Thus it controlled not only the minting of money but also the process of putting in circulation a very considerable proportion of the coin. Money changers were instrumental in making the move from copper to silver to gold.

This system was also supported by an ideological stance that sought a balance between the individual's desire for profit and the social need for stability, fiscal justice, justice in exchange, and the protection of those considered to be "weak" or "poor." The concepts found expression not only in overtly ideological texts but also in state action, both in the protection of the peasantry and in the regulation of profits and crafts, at least in Constantinople. As a result, the economy went through a period of gradual development and prosperity. Both the urban dweller and the peasant could survive on his or her earnings or on his or her production, although in periods of crisis the reserves were insufficient.

Thus the idea of an economy in equilibrium in the tenth century has a good deal of truth in it. However, there were also strong elements of tension. Visible primarily in the countryside, they are expressed through the decreasing resistance of rural structures to the other form of economic organization, the large estate. Here the state played a somewhat inconsistent role, adopting certain measures that hastened the transformation of the system it sought to control. The sale of clasmatic land to individuals helped accumulation, while the state itself was the largest landlord and, under Basil II, organized new lands and clasmatic lands into its own estates.¹² Furthermore, the system described above served some needs well, but also created impediments to further economic growth. In the cities, or, rather, primarily in Constantinople, the rules governing guilds may have kept profits reasonable and prices relatively stable, thus profiting the consumer. They did keep the quality of products high, as the silks and works of art of the period testify. On the other hand, the regulation of profits meant that the merchant must look to low fixed costs and rapid turnover, and reduce capital investments; to that extent, growth is impeded. Similarly, in the countryside, the legislation of the Macedonian emperors aimed precisely at preventing the accumulation of land in the hands of private individuals, whether these were members of the aristocracy or richer peasants who, probably taking advantage of the growth of the agricultural economy, tried to invest their earnings in land. Therefore, this system, which promoted social

¹¹ Lefort, "Rural Economy," *EHB*.

¹² N. Oikonomides, "The Role of the Byzantine State in the Economy," *EHB*.

stability and favored measured expansion, also placed impediments in the way of rapid growth.

That rapid growth nevertheless came in the eleventh and twelfth centuries is due to a number of factors, first, to the very fact that the tenth-century system was not solid. Second, it has been argued in another chapter that the state was able to adapt itself to the needs of a new era.¹³ Third, as growth continued, a point was reached where the agrarian economy responded to the new conditions created by opportunities for profit. Finally, the general prosperity of the Mediterranean and the opening of the western European markets also created new conditions. It is a fact, rarely stressed, that the Byzantine economy responded with remarkable flexibility.

The Takeoff (Eleventh and Twelfth Centuries) Over the past few decades, the eleventh and twelfth centuries have been recognized as periods of economic growth, a judgment that goes counter to most of the earlier historiography. The main reason for the earlier perception, held by eminent historians, was that they saw Byzantium from the viewpoint of the state and considered that the military defeats and evident decline of the state in the late eleventh century, as well as the territorial retraction in the twelfth century, were paralleled by a decline in the economy. Instead, it has been recognized that, for the first time in Byzantine history, there was a disjunction between military and territorial developments on the one hand and economic activity on the other. It is also the case that recent historiography tends to place Byzantium into the Mediterranean context, which was one of expansion during this period. Finally, historians now look with a different eye at developments that in the past had been considered negatively: all devaluations had been thought bad, whereas now we differentiate between “devaluations of expansion” and those that result from a crisis; the large estate, once thought to signal and promote the collapse of Byzantium and its agrarian base, is now seen as a factor in economic expansion.

Most sectors of the Byzantine economy experienced accelerated growth in the course of the eleventh and twelfth centuries. The period is characterized by a continuous growth of population, greater urbanization, increased production in all sectors, and the emergence in numerous urban centers of the production of manufactured goods, both luxury products and items of consumption for a middle-level market as well as for mass consumption. Some innovations of a technical order probably affected productivity. It should be noted that these innovations, visible in the eleventh and twelfth centuries, may have been achieved earlier and not registered in the less numerous sources of the times. This is also a period in which free market mechanisms play a much greater role than before. It is worth recalling some of the salient examples of the rise in production and probably productivity.

In agriculture, we find the development of new crops, namely, oats and rye, while

¹³ Ibid.

spring wheat, known since ancient times, is mentioned in the eleventh and twelfth centuries.¹⁴ The water mill, present since the tenth century, appears frequently in the sources of the period under discussion. These improvements went hand in hand with expansion into previously uncultivated areas, a general phenomenon in the eastern Mediterranean of this period. Generally speaking, both peasants and landlords participated in land improvement. Polyculture and polyactivity, a feature of Mediterranean agriculture that transcends narrow chronological boundaries, worked well with expanding demand for alimentary products and industrial raw materials: the many varieties of wine and cheese attested in the twelfth century suggest a certain crop specialization (always within the context of polyactivity) connected with the market.

The growth of the agricultural sector took place increasingly within the framework of the estate, which experienced significant expansion, perhaps becoming dominant in the twelfth century. It has been argued in this book that the estate made for better management and for a different approach to agriculture, since land was now seen as profit-producing capital. The land market may have become liberalized, as the protections afforded to smallholders by the Macedonian state were no longer applied. The effects of these transformations, however, were tempered by two facts: the continuing prominence of the state as landlord, and the fact that production and the exploitation of the soil took place in small units, within the estate structure. As far as the role of the state as landlord is concerned, there is, however, fragmentation, with donations of estates to members of the imperial family and with the grant of *pronoiai*.¹⁵

The fiscal system adjusted to the realities of the spread of the estate by developing practices that, no longer based on the fiscal solidarity of the village community, taxed the wealth of individuals. Whereas the new fiscality may have facilitated the circulation of money, it overtaxed the peasant and undertaxed the privileged estate owner. A policy of privileges benefited public officials, many estate owners, and the Italian merchants; but it had detrimental effects on nonprivileged groups and eventually had negative political and social repercussions as far as the state was concerned.

Urban agglomerations increased in number and size in the twelfth century, with distribution throughout the Byzantine Empire. Estimates of population and details regarding geographic expansion are to be found in the preceding chapters. It is self-evident that increased urbanization was predicated upon higher levels and greater efficiency of exchange and that cities functioned as centers of exchange. More interesting is that cities were also centers of industrial production as, to a much lesser extent, was the countryside. Pottery was manufactured in large quantities and different styles in a number of cities, from Corinth to Kherson; manufacturing was large-scale and catered to both a discriminating market and a luxury one; technical innovations permitted mass production. The fact that local manufacturing of ceramics coexists with the widespread diffusion of certain types is proof of the increase in demand, the in-

¹⁴ Lefort, "Rural Economy."

¹⁵ Oikonomides, "Role of the Byzantine State."

crease in production, and the commercialization of production. Glass was manufactured in Corinth, Constantinople, Sardis, and Tŭrnovo.¹⁶

As for silk, its manufacture and diffusion were remarkable. Around the year 1000, there was, here too, a technical innovation, with the spread of a more advanced hand loom.¹⁷ More important, however, is the remarkable increase in provincial production in the eleventh and twelfth centuries.¹⁸ Thebes, Corinth, and the small island of Andros among others joined Constantinople as centers of production of silk textiles, the raw materials for which were among the industrial crops mentioned in connection with the agricultural economy. The silk industry sustained economic activity not only in the place of manufacture but also in other areas that produced complementary materials for the treatment and dyeing of silk: an example is Athens, where the production of soap and purple dye was linked to the silk industry of Thebes. The increase in production is linked by D. Jacoby to increased demand, less that of the imperial court and more that of the aristocracy and the urban middle class, both groups with high revenues and an interest in social status. The local aristocracy was involved in the production of silk cloth, and the merchants, Byzantine and then Italian ones, with the diffusion of the cloth within the empire, in Egypt, and in the West.

The Byzantine city of the twelfth century, then, was far from being a mere center of consumption as earlier historiography would have it. While Thebes and Corinth may have been exceptional in terms of the quantity and quality of the manufactured goods they produced, almost all cities for which we have information were centers of production, even when they catered primarily to the local market.

In terms of trade, apart from the increase in activity, certain other salient traits should be mentioned. The first is that the activities of the merchant took place in a climate where the mechanisms of the market were allowed to operate to a much greater degree than before. This fact is reflected also, remarkably, in the emergence of an ideological tendency that gave positive value to profit, recognized interest as the profit of capital, and accepted, even attempted to approach theoretically, the functioning of the free market.¹⁹ Second, the merchants and bankers of the eleventh and twelfth centuries were a large, rich, and powerful group, certainly in Constantinople. Their activities, both in trade and in money changing, extended into the provinces as well as into international markets. Third, their activities increasingly took place within a larger context and in conjunction and eventually in competition with the activities of Italian merchants on Byzantine soil. Apart from the effects of this on the Byzantine merchant, it is important to note that the presence of the Italians both in the Byzantine Empire and in the Crusader states led to institutional innovation: among other things, it led

¹⁶ Bouras, "Byzantine City"; V. François and J.-M. Spieser, "Pottery and Glass in Byzantium," *EHB*.

¹⁷ A. Muthesius, "Essential Processes, Looms, and Technical Aspects of the Production of Silk Textiles," *EHB*.

¹⁸ On this topic, see D. Jacoby, "Silk in Western Europe before the Fourth Crusade," *BZ* 84/85 (1991–92): 452–500.

¹⁹ A. E. Laiou, "Κοινωνική δικαιοσύνη: τὸ συναλλάττεσθαι καὶ τὸ εὐημερεῖν στὸ Βυζάντιο," *Πρακτικὰ Ακαδημίας Αθηνῶν* 74 (1999): 103–30; eadem, "*Nummus parit nummos*: L'usurier, le juriste et le philosophe à Byzance," *Académie des Inscriptions et Belles Lettres* (Paris, 1999): 585–604.

to the development of a law of the sea that regulated important matters and applied to all merchants active in the eastern Mediterranean. The Byzantines were among the first to amend the law of salvage in a way that afforded protection to foreign merchants. They also eventually protected the property of foreign merchants who died on Byzantine soil.²⁰ Thus the transaction costs for foreign merchants involved in international trade were reduced. The Byzantine merchants were not in a privileged position; for them, the lowering of the transaction costs came primarily through the growth of fairs, markets, and the activities of money changers and bankers.²¹

There *was* a crisis in this period in the monetary system. It came in the late eleventh century and was in part the result of the military and political disasters of this unstable period, increased thesaurization, and the reduction in monetary stocks.²² Both the monetary and the fiscal system were reformed by Alexios I. The great expenses necessitated by the grandiose foreign policy of Manuel I and the disastrous one of the Angeloi, in combination with a fiscal system that reduced the proportion of the surplus appropriated by the state, led to another crisis in state revenues in the late twelfth century.

It is an especially unfortunate and sadly irremediable fact that we have little information about the movement of prices in the eleventh and twelfth centuries. In particular, one would have liked to know the relative movement of the prices of agricultural goods versus those of manufactured products and, of course, the price of labor, which would have allowed us to achieve a better understanding of the adjustments to change. The price of land and cereals may have risen during this period. We do know that the price of capital rose. Interest rates had remained stable since the time of Justinian; in the eleventh and twelfth centuries, they experienced a real, although tacit rise. For one category of borrower, that had been particularly privileged by Justinianic legislation, a rise of 85% is attested. In general, the rise seems to have been in the order of 38% compared to the rates of the sixth century. It is important to remember, however, that with the normal interest rate having risen from 6% to 8.33%, interest rates were still moderate and certainly do not suggest a capital famine. Interest rates are, generally speaking, connected to profit rates; it is therefore likely that interest in the eleventh and twelfth centuries was an “economic” interest, that is, the profit of capital at a time of rising profits. We should recall that in the eleventh and twelfth centuries we have evidence not only for consumption loans but also for productive loans; the merchants are the social group most in evidence as borrowers, although loans were also contracted for the purchase of land.²³

The Byzantine economy was productive and quite well articulated in the twelfth

²⁰ A. E. Laiou, “Byzantine Trade with Christians and Muslims and the Crusades,” in *The Crusades from the Perspective of Byzantium and the Muslim World*, ed. A. E. Laiou and R. Mottahedeh (Washington, D.C., 2001), 158–96.

²¹ On similar developments in western Europe in the 13th century, see North and Thomas, *Western World*, 53ff.

²² C. Morrisson, “La dévaluation de la monnaie byzantine au XI^{ème} siècle: Essai d’interprétation,” in *Monnaie et finances à Byzance: Analyses et techniques* (Aldershot, 1994), art. 9, 20ff.

²³ Laiou, “*Nummus parit nummos*,” and eadem, “God and Mammon: Credit, Trade, Profit and the Canonists,” in *Τό Βυζάντιο κατά τόν 12ο αιώνα*, ed. N. Oikonomides (Athens, 1991), 283–96.

century. On the basis of all the data and analyses presented in the previous chapter, we have constructed a model of what the economy may have looked like in the early to mid-twelfth century. It must be emphasized here that the model consists of a system of interdependent equations forming a coherent framework within which all the relevant factors are integrated. We believe that the model as a whole represents a plausible picture of the Byzantine economy in the early to mid-twelfth century. If one were to change any one of the individual parameters, one would have to examine the effects of the change upon the other factors, its consequences on the coherence of the model, and the plausibility of the global picture that would emerge.

Table 1
A Simple National Accounting Model, Twelfth Century

The two fundamental dichotomies that help interpret and check the consistency of hypotheses about the Byzantine economy are as follows:

- (a) The relative weight of monetized vs. nonmonetized production
- (b) The relative weight of agricultural vs. nonagricultural production

The simultaneous examination of these dichotomies takes a two-dimensional matrix form. Based on the evidence in this book, we take the following parametric values:

- (a) Agriculture represents 75% of domestic production.
- (b) Monetization of agriculture is 35%.
- (c) Monetization of the nonagricultural sector is 80%.
- (d) The tax burden on **total** agricultural product is 23%.²⁴
- (e) The tax burden on **monetized** nonagricultural product is 20%.

The following scenario ensues:

Agriculture represents 75% of national product

	Agricultural	Nonagricultural	Total
Monetized	26.25	20	46.25 (Y_m)
Nonmonetized	48.75	5	53.75 (Y_{nm})
Total	75	25	100 (Y)

Implications

National product monetization ratio (Y_m/Y) = 46.25%

Ratio of nonagricultural monetized product to total monetized = 43.24%

²⁴ See Oikonomides, "Role of the Byzantine State," and Lefort, "Rural Economy."

Table 1
(continued)

<i>Public revenues from taxation on national product</i>		
Revenue from agriculture:	$0.23 \times 75 =$	17.25
Revenue from nonagricultural sector:	$0.20 \times 20 =$	4
Total		21.25
Burden on total National Product:	21.25%	
Share of revenues from agriculture:	$(17.25/21.25) = 81\%$.	
Share of tax in monetized agricultural product:	$\{(4/5) \times 17.25\}/26.25 = 52.6\%$ ²⁵	

This is an expansionist scenario, since it leaves a considerable part of the monetized agricultural product in the hands of the producer or the landlord. The percentage of nonagricultural domestic production (25%) is consistent with a rate of urbanization equal to or greater than 15%, which is very likely indeed in this period. Trade and revenues from trade play an important role in this scenario, considerably more than is usually implied. The duties levied on transit trade have not been included in the calculations; had they been, the state’s revenues from the trade sector would have been higher, since the sources give large figures for the duties collected in Constantinople from such trade. Eventually, some of these revenues would escape the fisc, because of privileges granted to Italian merchants. The scenario also has important implications for monetary circulation, which have been discussed in an earlier chapter.²⁶

The Byzantine economy of the twelfth century shares many aspects of the western European economy during the “long” thirteenth century, at least where we have the information to draw comparisons. In western Europe, this was a dynamic period, in which the rapid growth of population led to economic and institutional adjustments. The marginal productivity of labor declined relative to the value of the land, real agricultural wages fell, and the price of agricultural goods rose relative to other products. That price movement we cannot follow in Byzantium, although there are tantalizing indications of a rise in the price of land and wheat. Other parallels can, however, be observed. There were technological improvements in agriculture in western Europe, although they were different from those in the Byzantine Empire. Aggregate productivity in the West rose, because of the increase in trading activities. That, in turn, elicited institutional responses such as more efficient forms of investment, a certain institu-

²⁵ Cécile Morrisson and I are very grateful to Christian Morrisson and Stavros Thomadakis for their very considerable help in the construction of this model.

²⁶ C. Morrisson, “Byzantine Money: Its Production and Circulation,” *EHB*.

tionalization of fairs and markets that reduced the cost of information, and the early development of banking. Trade and expansion into new lands increased specialization of production. Interestingly for the comparison with Byzantium, it has been argued that trade, while it influenced the pattern of production in manufacturing, did not have sufficient impact on agriculture to offset the impact of diminishing returns to labor. At the same time, the impact of the new conditions on the state was to create a tendency toward a larger state, if one may use the term, and new fiscal impositions, in response to the need for protection and institutional coverage of the merchants over large areas.²⁷

The parallels between the West and the Byzantine economy as we have described it in this book are obvious. For one thing, they support our insistence on trade as a dynamic element in the medieval economy, especially in the eleventh and twelfth centuries.

The "Lost" Thirteenth Century: Byzantium in the Mediterranean Economy (to ca. 1340s)

While the economy of western Europe was on an upward curve in the thirteenth century, that of Byzantium presents phenomena of disarticulation. Indeed, given the political fragmentation attendant upon the Fourth Crusade, it is difficult to say what, precisely, was the Byzantine economy, at least until 1261. Scholars often focus on Nicaea, undoubtedly because it was the most important successor state and also because the documentation is richer. But there were other successor states, in Greek, Serbian, Bulgarian, and Latin hands. The political fragmentation meant that there was not a single state playing the traditional role of providing economic integration, at least until Michael VIII recaptured Constantinople and undertook the process of recovering lost territories. Instead, we have the emergence of regional economies. This means that the coinage, for one thing, was decentralized, the empire of Nicaea having the most solid monetary system, but with a slightly debased coinage, while foreign coins begin to penetrate Byzantine and formerly Byzantine lands. In Tŭrnovo, Bulgarian coins appear in 1257.²⁸ There was certainly no unified state fiscal system in the lands formerly Byzantine. There was no unified national market, with the characteristics and protections that were in force in the past. Significantly, the export of gold to the West was permitted after 1261.²⁹

Trade still played an integrative role and was increasingly to do so in the course of the thirteenth and fourteenth centuries, integrating the regional economies. But trade was now primarily in the hands of the Italians, which means that the integration took place under their control and served their own interests. Furthermore, the integration was not yet complete in the thirteenth century. Venice held a privileged position during the first half of the century, and its economy entered a period of rapid expansion that would last until the middle of the fourteenth century. But there were strong rivalries

²⁷ For all of the above, see North and Thomas, *Western World*, 46ff.

²⁸ Morrisson, "Byzantine Money"; K. Dochev, "Tŭrnovo: Sixth–Fourteenth Centuries," *EHB*.

²⁹ Morrisson, "Byzantine Money."

with Genoa, which erupted in wars. The volume of trade had not yet reached the high point it would attain in the early fourteenth century, nor, until the late thirteenth century, had the two major Italian maritime cities received, in the restored empire, the full commercial privileges that would eventually lead them to true domination of the trade system.³⁰ Besides, the reestablishment of Byzantine hegemony in Constantinople reintroduced a strong Byzantine interest in the Black Sea. Still, the string of Venetian commercial colonies was playing an important role in the eventual integration of the commercial economy. It should be remembered that none of this means that the Byzantine merchants were absent from the area. Quite the contrary is true, for they were active indeed.³¹ The issue here is, rather, that of the control of commercial activity.

The Byzantine thirteenth century presents the additional problem of poor documentation and thus has not been extensively studied. Nevertheless, some general statements can be made. As far as the factors of production are concerned, it would seem that the population continued to rise. Agricultural production, where we have evidence, that is, in the empire of Nicaea, progressed and was even improved because of the measures taken by the emperors. However, land clearance may have slowed down in the course of the century, and by the end the abandonment of marginal lands may well have started. The indications for a price rise in the early fourteenth century partially result from these phenomena.³² The urban economy is poorly known. Constantinople suffered greatly from the Latin occupation; its own industries, to the extent that they were tied to the court, must have declined, to revive somewhat under the first Palaiologoi. Sardis benefited from the policies of the emperors of Nicaea, and there is evidence of prosperity and manufacturing of pottery and glass under the Laskarids. But Corinth and Athens declined. Generally speaking, it seems that a number of cities entered a phase, which would continue in the fourteenth century, of either a decline in their manufacturing activities or an integration of these activities into the progressively Italian-dominated trade system. Thus the glass industry of Corinth declined and was replaced by products of the Venetian glass industry, which were even imported into the Romania. Some luxury objects, such as enamels, were replaced by semiluxury ones, miniatures under glass in this case, manufactured in Venice.³³

The production of silk textiles declined in Constantinople but persisted in places that were under Latin domination, such as Thebes and Andros, and expanded in other areas, such as Euboea, equally under western control.³⁴ In textiles generally, the cheaper western products began to appear on the market in formerly Byzantine areas; the trend would become very significant in the fourteenth century.

Pottery experienced a notable expansion. The number of workshops and centers of production continued to increase, as did production itself. The introduction of stilts

³⁰ On all this, see A. Laiou-Thomadakis, "The Byzantine Economy in the Mediterranean Trade System: Thirteenth–Fifteenth Centuries," *DOP* 34/35 (1980–81): 177–222.

³¹ K.-P. Matschke, "Commerce, Trade, Markets, and Money, Thirteenth–Fifteenth Centuries," *EHB*.

³² C. Morrisson and J.-C. Cheynet, "Prices and Wages in the Byzantine World," *EHB*.

³³ A. E. Laiou, "Venice as a Centre of Trade and of Artistic Production in the Thirteenth Century," in *Il Medio Oriente et l'Occidente nell'arte del XIII secolo*, ed. H. Belting (Bologna, 1982), 11–26.

³⁴ Jacoby, "Silk," 460ff, 467ff, 498.

in the mid-twelfth century permitted the mass production of ceramics, which was undoubtedly stimulated by the existence of numerous markets and the expansion of trade. There was thus a very healthy ceramics industry, with centers in both Byzantine lands (Thessalonike, Pergamon, Serres, Nicaea) and lands formerly Byzantine (Corinth, Thebes, Kherson, Cyprus). Some pottery production was rural, catering to local needs, but most was tied to Mediterranean trade.³⁵

In brief, population and agricultural production were not adversely affected by the political fragmentation, but underwent a development similar to that of western Europe in the late thirteenth and early fourteenth centuries. Sporadic demographic problems may indicate the beginnings of a crisis. On the other hand, because of the political changes in the eastern Mediterranean, the economy of exchange and even manufacturing entered a period in which western Europe was expanding, and was eventually able to shape the structures and mechanisms that governed these sectors, at least in part. The Byzantine economy globally was not able to benefit from expanding markets. Thus the thirteenth century has a significantly different aspect in the development of the economies of some western European countries, specifically the maritime states, and the Byzantine lands. It is for all these reasons that the thirteenth century may be termed a “lost” century as far as the global Byzantine economy is concerned.

It was not a “lost” century for the inhabitants of the Byzantine possessions and the Romania generally. Economic growth continued, and society generally was prosperous in the late thirteenth century—certainly more so than in later periods, perhaps more than in earlier periods according to some scholars. It is important to distinguish between the economy on the ground, as it were, and that of an organized political unit.³⁶

The reestablishment of a relatively large Byzantine state, with its capital in Constantinople, after 1261, allows us again to speak of a Byzantine economy, operating, now, within the larger context of the Romania and its regional economies. Developments in agriculture may be seen as a continuation of the previous period, with, originally, even some improvement due to the reestablishment of relative security. The population continued to increase, certainly until the early fourteenth century, perhaps until the early 1340s. There were still investments in agricultural activity, and the rural economy was quite well articulated. In the first half of the fourteenth century, the impoverishment of part of the peasant population serves as evidence of the effects of the diminishing returns to labor. It should, of course, be remembered that the impoverishment was also a cause in the expansion of the large estate as well as, in turn, the result of the concentration of some resources, namely, arable land and oxen, in the hands of estate owners.³⁷ Diminishing returns may have been partly due to demographic factors. However, their impact was mitigated by the existence of a market for agricultural products,

³⁵ François and Spieser, “Pottery and Glass.”

³⁶ I am indebted to Jacques Lefort who helped me clarify my thinking on this important issue. While he is more persuaded than I am of the high level of prosperity in the late 13th century, we are in agreement as to the existence of prosperity.

³⁷ A. E. Laiou, “The Agrarian Economy: Thirteenth–Fifteenth Centuries,” *EHB* 339ff.

both in the Byzantine cities and in the larger international markets. Polyculture served the rural economy well, providing the cash crops for which there was higher effective demand because of more efficient trade networks. Unsurprisingly, there is evidence of investment in cash crops or in *autourgia* on the part of both peasants and landlords. In terms of the organization of production, the large estate increasingly provides the framework. Within it, the economic arrangements of landlords and peasants took various forms, reflecting both the fiscal origin of some of the lands and privileges of the estate holders and the perceived interests of the parties. Exploitation was mixed, with *corvée* labor, day labor, and rent agreements; small-scale exploitation and sharecropping agreements were probably dominant.

In the economy of exchange, there is a double development. The eastern Mediterranean, including Italy, functioned as an international market, with division of labor, efficient techniques of acquiring and disseminating information, widely accepted currencies, and the functioning of supply and demand mechanisms. This international trade system was dominated by the Italians, primarily the Venetians and Genoese, whose merchants had acquired privileges, and who also had established colonies in the eastern Mediterranean. They were the ones who integrated the various regional commercial zones.³⁸ The Byzantine merchants participated, to some extent, in this long-distance trade, but very much as junior partners of the Italians. The balance of trade between East and West remained deficitary for the West in this period, although less so than in the past. Partly as a result of this, and partly as the result of the lower costs of mass-produced manufactured products originating in western Europe, there was heavy export of bulk products and textiles to the eastern Mediterranean. This, combined with the fact that Byzantine manufacturing enterprises became smaller in this period, led to decline in Byzantine artisanal production.³⁹ The lack of an industrial base placed the Byzantine economy in a position inferior to that of western Europe.

The second development connected to exchange in this period has to do with regional and local trade. In these markets, although foreign merchants do appear, the local trader, especially the Byzantine one, played an important role. He acted both in his own name, serving the needs of local and regional markets, and as an intermediary for the Italians, eventually serving the needs of long-range commerce. The Byzantine merchant and trader is an important figure in the countryside and the towns of the empire, who shared, although as a junior partner, the benefits from the vitality of exchange in the eastern Mediterranean.

The reversal of the position of the Byzantine Empire with regard to trade and manufacturing from one of primacy to one of dependence may be described as a shift to the periphery of the economy of the Mediterranean, the Italian city-states occupying the core. Paul Krugman, who has created a sophisticated center-periphery model of un-

³⁸ Laiou-Thomadakis, "Byzantine Economy," 180; Matschke, "Commerce," *EHB*.

³⁹ K.-P. Matschke, "The Late Byzantine Urban Economy, Thirteenth–Fifteenth Centuries," and J. Day, "The Levant Trade in the Middle Ages," *EHB*; Laiou-Thomadakis, "Byzantine Economy," *passim*.

even development, ascribes to trade a key role in the emergence of differentiated regions, that is, a manufacturing core and an agricultural periphery.⁴⁰ He has argued that under certain conditions trade between two regions or countries can result in the concentration of manufacturing in one of the regions and agricultural production in the other. His model suggests that the process of regional divergence is cumulative, and that the region with the initial advantage is more likely to become the core.⁴¹ What happened in the Mediterranean in the course of the high and late Middle Ages was a shift of concentration of manufacturing and trade. It is possible that the comparative advantage of the Italian maritime states and of the western European economy lay in a larger population, larger capital resources, and larger markets than those of the Byzantine Empire. What I am arguing also happened is that trade itself became a mechanism for uneven development.

The restored Palaiologan state played much less of a role than in the past in the structuring of the economy. The first Palaiologoi exercised a relatively heavy fiscal policy, which, however, was impossible to maintain, for it was sapped by the continuing grants of privileges to the church and to laymen. The tax burden on the peasants increased, but the state did not really profit from it.⁴² Similarly, at the time of the first two Palaiologoi, the state tried to reinstitute some traditional controls on the economy of exchange and even to place some limits on the privileges granted to the Italians. That policy, however, could not succeed in the face of economic reality; the state did grant substantial privileges both to the Italians and to Byzantine merchants, such as the *Monemvasiots*. Eventually, the markets of the Byzantine Empire and the eastern Mediterranean were liberalized to a degree, to the benefit of the trading population, especially the Italians.

Thus a vigorous economy of exchange was important in integrating the Byzantine economy. However, the integration took place into a larger system, which by its very nature limited and circumscribed the role of the Byzantines, since the initiative and the important mechanisms lay outside their control. As a result, the Byzantine economy of the second half of the thirteenth century and the first half of the fourteenth was vulnerable not only to its own, internal dynamic, but also to the limitations, crises, and inefficiencies of other states and economies.

The Last Crisis (1340s–Mid-Fifteenth Century)

Given the developments analyzed above, there is little left to say about the last hundred years of the existence of the Byzantine state. In the 1340s, a conjunction of factors had catastrophic effects on the population, the agriculture, and the economy of exchange. A combination of endemic wars, the previous expansion into marginal lands, the im-

⁴⁰ P. Krugman, *Geography and Trade* (Cambridge, Mass., 1991); idem, *Rethinking International Trade* (Cambridge, Mass., 1994).

⁴¹ Krugman, *Geography and Trade*, 11 and *passim*.

⁴² A. E. Laiou, "Le débat sur les droits du fisc et les droits régaliens au début du 14^e siècle," *REB* 58 (2000): 97–122; Oikonomides, "Role of the Byzantine State," *EHB*.

poverishment of the peasantry, the plague that struck all of Europe, the Ottoman expansion, and the subsequent long restructuring of the trade of the eastern Mediterranean resulted in steep decline. Furthermore, the end of the Pax Mongolica in the middle of the century reduced the economic importance of Constantinople, as the Egyptian outlets for the eastern luxury trade became safer and more lucrative compared to those that depended on the northern and central trade routes from Asia.⁴³ The acute rivalries between Venice and Genoa, caused by the crisis in international trade, also had negative effects on Byzantium.

Of course, the decline was general in the economies of Europe, where the fall in population had well-known results. Theoretically, the decline in population should have resulted, in Byzantium as in western Europe, in a higher per capita income, the concentration of capital resources in fewer hands, a drop in rents relative to labor, and a redistribution of income in favor of the peasant or agricultural worker.⁴⁴

Indeed, a few of these effects are dimly visible in what remained of Byzantine lands. There was, certainly, concentration of resources into the hands of a few very rich individuals or in the possession of some monasteries. Individuals profited from the upheavals and the opportunities offered at an international level. Land did become cheaper, labor may have gained some bargaining power. However, the “positive” effects of the population decline on those who remained have rightly been questioned in the case of western Europe.⁴⁵ It has been pointed out that they were counterbalanced by a decline in specialization, by rising transaction costs in the economy of exchange, and by feelings of insecurity that led to risk-aversion and to conflicts attendant upon the efforts of various groups to redistribute income in their favor. This was much more the case in the Byzantine lands, where political and military events made for extreme insecurity and destruction of resources; that some people made considerable money by running blockades is not enough to offset the dwindling resources and opportunities. Furthermore, in some cases, the most notorious of which is that of Loukas Notaras, the accumulation of capital in the hands of some individuals had mostly negative effects on the Byzantine economy, since the capital was invested outside it, in Italian ventures and institutions. There is thus little light in the bleak picture of the last hundred years, and certainly the weak and impoverished state was in no position to influence the outcome of the crisis.

Structures, Potential, Achievements

The Byzantine economy did not constitute a single system; there are, rather, systems, resulting from the different proportions in the presence of economic factors and the various dynamics they produced. For this was, through most of its history, a mixed economy, including both a large state and smaller enterprises, government guidance,

⁴³ Day, “Levant Trade,” *EHB*.

⁴⁴ North and Thomas, *Western World*, 70ff. For a different approach to these questions, see Contamine et al., *L'économie médiévale*, 350–61.

⁴⁵ North and Thomas, *Western World*.

intervention, even regulation and free-market elements, restrictive and nonrestrictive ideologies.

Certain important characteristics and structures derive from long-term factors that were common to medieval systems, especially Mediterranean ones. The primary role of agriculture is a phenomenon shared by most precapitalist systems, with only a few exceptions. This is also the case with the role of population: in these labor-intensive systems, population becomes a most significant factor in the growth or shrinkage of the economy. The dynamic effects of exchange in the structuring of the economy, especially the monetized economy, is a trait shared by medieval European economies.

There are also long-term structures characteristic of the eastern Mediterranean. The climate and the terrain are important determinants of the crops; they also create the physical conditions for the development of polyculture and polyactivity with all that these practices entail. There is comparable land use throughout the eastern Mediterranean, while the complementarity of village and estate is a shared historical experience. Closeness to the sea is responsible not only for the existence of certain high-yield crops, but also for the importance of sea communications in this eminently navigable basin.

The major Byzantine specificities consist in and derive from the existence, through most of the period in question, of a powerful state with the ability and the desire to intervene in the economic process; the relatively high level of monetization and the persistence of exchange are partly due to the impact of the state on the economy. It is not unusual to find, in the literature that discusses the Byzantine economy, the concept of conflict between state mechanisms and market forces and the virtual exclusion of one by the other. It has been argued that Byzantine "protectionism" was good and that it was bad; that it made the glory of Byzantium or that it sapped its dynamism. It has also been argued that the Byzantine economy collapsed because it became open to market forces, or, on the contrary, that the problem was that it never became sufficiently involved in free enterprise. It is time to abandon the simplistic version of such formulations. Indeed, throughout our collective work we have sought to introduce important nuances and changes to the conception of "protectionism," "regulation," and free exchange in Byzantium.

It is the very idea of a quintessential antagonism between state action in the economy and the playing out of market forces that must be modified. Modern development and growth theory recognizes essential functions to both in the process of economic development.⁴⁶ Somewhat obviously, the role of government is most clearly perceived and most easily accepted in the areas of security and infrastructure (roads, etc., relevant also for Byzantium) and, in modern economies, health, education, research, and

⁴⁶ See, for example, R. Grabowski and M. P. Shields, *Development Economics* (Cambridge, Mass., 1996), 37ff. On neoclassical development theory and new growth theory, see A. R. Barros, "Some Implications of New Growth Theory for Economic Development," *Journal of International Development* 5 (1993): 531–58. See also the interesting remarks on development economics in P. Krugman, *Development, Geography, and Economic Theory* (Cambridge, Mass.–London, 1995). There are, of course, also economists who take a very dim view of government intervention in any but the most minimalist form; for a summary of these arguments, see N. Stern, "The Economics of Development: A Survey," *Economic Journal* 99 (1989): 615.

development. It is somewhat less generally accepted insofar as welfare-improving policies are concerned. Some economists even accept protectionism as having a positive role for economic growth, up to a point.⁴⁷ Unsurprisingly, perhaps, some economists argue that government intervention in the economy is positive “until a given level,” and then becomes detrimental.⁴⁸ Equally unsurprisingly, it is in the developing rather than in the developed economies that the role of government is seen as potentially more beneficial, although in truth that role is quite substantial in developed economies as well.

For Byzantinists, it is of interest to note that modern economists recognize not only a positive role to government and the market both, but also the limitations of both. Indeed, an interesting list exists of problems that lead to market failure on the one hand and state “failure” on the other, that is, problems inherent in the market and in state intervention in the economy.⁴⁹ All these concepts are relevant to our discussion of the Byzantine economy since, in my view, that economy is an excellent example of the complementarity of state action and market activities in the Middle Ages. The form these two elements took and their relative weight in the economic process changed significantly over the centuries, as has been argued in the preceding chapters. I have tried to suggest, in the chronological overview, that the changes followed a pattern of adaptation to new economic conditions, those of growth, accumulation, larger and more open markets, and that they did so successfully at least until the end of the twelfth century, even later in particular segments of the economy. Throughout the same period, there is a consonance between economic ideology, state action, and economic reality. Through the period of slow growth, the state supported those institutions that promoted stability, stability acquiring economic importance in a fragile system: the small producer, the just profit, the just rewards to labor. The period of more rapid growth is concomitant with the infusion of cash into the economy, the engagement of capital through the increase of the interest rates, the liberalization of price formation, and the acceptance (always with some strictures) of the formation of profits through the functioning of the market. Yet even in this period, ideas of justice in exchange remained, certainly in what concerns immoderate accumulation. The remarkable flexibility of state and society in the face of change is one of the strengths of the Byzantine economic systems. The other is that, for a long time, the combination of state action and private enterprise worked rather well, which is to say that the “flaws” of both were contained.

The result was an economy that was relatively well balanced at least through the twelfth century. Its development was measured and, although economic and social inequality increased in the twelfth century, there was no unbridled growth and disparity. The preceding chapters have shown not only that the Byzantine economy functioned rather well, but also that it sustained or provided some of the important needs of people: basic necessities but also a surplus in many cases, relative safety, relatively

⁴⁷ Barros, “New Growth Theory,” 552.

⁴⁸ *Ibid.*, 543.

⁴⁹ See Stern, “Economics of Development,” 616, and the discussion on 616–22.

good communications, even a fairly extensive basic literacy—in brief, a standard of living that compares very well with that of other medieval European areas. Both global and individual income was probably higher than in western Europe of comparable periods, and there may have been less inequality among social and economic groups, at least until the late twelfth century.

There were, also, factors that inhibited the rate of growth. The state, as we have seen, tried to limit accumulation in the tenth century. The size of enterprises was kept small, in the same period. In the twelfth century, the extractive Komnenian government created political disaffection that was to prove detrimental to the state, while its large expenditures eventually produced a fiscal crisis. In the same period, the aristocratization of society revived a mentality that put a low value on merchant activity, and may have kept some of the capital of the aristocracy outside trade and banking. These were all structural and institutional problems that should not be minimized. Nevertheless, as the twelfth century drew to a close, the agrarian economy was thriving, the economy of exchange also, there were credit mechanisms, and manufacturing flourished.

If sustained economic growth consists of the long-run per capita rise in income, it is obvious that no European economy achieved it until the sixteenth or seventeenth century.⁵⁰ Neither did the Byzantine economy. The question is whether there were specific reasons that made it lose its coherence. The answer lies in a combination of political and economic factors. In the twelfth century, the state retained a large part of the resources and the power to distribute them, as well as the surplus. Once the state became fragmented, new equilibria had to be found. They took place on a smaller scale, in small political units, the most well known of which and perhaps the most successful being the empire of Nicaea. However, the Byzantine state economy had lost its autarky and had been drawn into an international economic system, under adverse conditions. Thus, while segments of the economy and segments of the population thrived, Byzantium entered the crisis of the late Middle Ages in an already weakened condition. Given the international realities, including the grave military dangers, the state could not play the integrative role of the seventh and eighth centuries, nor was there another mechanism to replace it in this function.

How the Byzantine economy would have developed were it not for the Ottoman conquest, which restored political unity and returned to older forms of economic organization, many reminiscent of earlier Byzantine forms, is an idle question. The differential development of the eastern Mediterranean and western Europe in the early modern period is too great to permit speculation. Nor is the point at issue why the Byzantine economy did not develop into a capitalist one. It is, rather, that, within the limitations imposed by medieval conditions, the Byzantine economy was highly successful for a very long time, supporting both growth and stability.

⁵⁰ North and Thomas, *Western World*, 1–2 and *passim*.

List of Abbreviations

- AASOR *The Annual of the American Schools of Oriental Research*
AASS *Acta sanctorum*, 71 vols. (Paris, 1863–1940)
AB *Analecta Bollandiana*
ΑΔ Ἀρχαιολογικὸν Δελτίον
ADSV *Antichnaia drevnost' i srednie veka* (Sverdlovsk)
AEpigr *L'Année épigraphique*, supplement to the *Revue archéologique*
AHR *American Historical Review*
AJ *Archaeological Journal*
AJA *American Journal of Archaeology*
AM *Mitteilungen des Deutschen Archäologischen Instituts, Athenische Abteilung*
AnatSt *Anatolian Studies*
AnnalesDH *Annales de démographie historique*
AnnalesESC *Annales: Economies, sociétés, civilisations*
ANSMN *American Numismatic Society, Museum Notes*
AntJ *The Antiquaries Journal*
AnTard *Antiquité Tardive*
AOL *Archives de l'Orient latin*, 2 vols. (Paris, 1881–84)
APh *L'Année philologique*
Ἀρχ.Βυζ.Μνημ.Ἑλλ. Ἀρχεῖον τῶν Βυζαντινῶν Μνημείων τῆς Ἑλλάδος
Ἀρχ.Ἐφ. Ἀρχαιολογικὴ Ἐφημερίς
ArchIug *Archaeologia Iugoslavica*
ArtB *Art Bulletin*
ArtJ *Art Journal*
ArtV *Arte veneta*
ASAtene *Annuario della Scuola archeologica di Atene e delle Missioni italiane in Oriente*
AStLomb *Archivio storico lombardo*
- BAC *Bulletin archéologique du Comité des travaux historiques et scientifiques*
BalkSt *Balkan Studies*
BAntFr *Bulletin de la Société nationale des antiquaires de France*
BASOR *Bulletin of the American Schools of Oriental Research in Jerusalem*
BASP *Bulletin of the American Society of Papyrologists*
BBulg *Byzantinobulgarica*
BCH *Bulletin de correspondance hellénique*
BHR *Bulgarian Historical Review/Revue bulgare d'histoire*

- BISI* *Bollettino dell'Istituto storico italiano per il medioevo e Archivio muratoriano*
BJ *Bonner Jahrbücher*
BMBeyr *Bulletin du Musée de Beyrouth*
BMGS *Byzantine and Modern Greek Studies*
BNJ *Byzantinisch-neugriechische Jahrbücher*
BSA *The Annual of the British School at Athens*
BSCAbstr *Byzantine Studies Conference, Abstracts of Papers*
BSl *Byzantinoslavica*
BSR *Papers of the British School at Rome*
ByzF *Byzantinische Forschungen*
ByzSt *Byzantine Studies/Etudes byzantines*
BZ *Byzantinische Zeitschrift*
- CahArch* *Cahiers archéologiques*
CahArt *Cahiers d'art*
CahCM *Cahiers de civilisation médiévale, Xe–XIIIe siècles*
CahHist *Cahiers d'histoire*
CFHB *Corpus fontium historiae byzantinae*
CIC *Corpus iuris civilis*, 3 vols. (Berlin, 1928–29; Dublin–Zurich, 1972)
CI *Codex Iustinianus*, ed. P. Krüger (Berlin, 1929)
Dig *Digesta*, ed. Th. Mommsen and P. Krüger (Berlin, 1928)
Nov *Novellae*, ed. F. Schoell and G. Kroll (Berlin, 1928)
CIG *Corpus inscriptionum graecarum*, 4 vols. (Berlin, 1828–77)
ClMed *Classica et mediaevalia*
CorsiRav *Corsi di cultura sull'arte ravennate e bizantina*
CRAI *Comptes rendus des séances de l'année de l'Académie des inscriptions et belles-lettres*
CTh *Theodosiani libri XVI cum constitutionibus Sirmondianis et leges novellae ad Theodosianum pertinentes*, ed. Th. Mommsen and P. M. Meyer, 2 vols. in 3 pts. (Berlin, 1905)
- Δελτ.Χριστ.Ἀρχ.Ἐτ. Δελτίον τῆς Χριστιανικῆς Ἀρχαιολογικῆς Ἑταιρείας
DOC A. R. Bellinger and P. Grierson, *Catalogue of the Byzantine Coins in the Dumbarton Oaks Collection and in the Whittemore Collection*, 5 vols. (Washington, D.C., 1966–99)
DOCat *Catalogue of the Byzantine and Early Mediaeval Antiquities in the Dumbarton Oaks Collection*, vols. 1–2 by M. C. Ross (Washington, D.C., 1962–65); vol. 3 by K. Weitzmann (1972)
DOP *Dumbarton Oaks Papers*
DOS *Dumbarton Oaks Studies*
EcHistR *Economic History Review*
 ΕΕΒΣ Ἑπετηρὶς Ἑταιρείας Βυζαντινῶν Σπουδῶν
EHB *Economic History of Byzantium*
EHR *English Historical Review*
EO *Echos d'Orient*

Ἑπ.Ἑτ.Στερ.Μελ. Ἑπετηρίς Ἑταιρείας Στερεοελλαδικῶν Μελετῶν

EtBalk *Etudes balkaniques*

EtByz *Etudes byzantines*

FM *Fontes minores*

GOTR *Greek Orthodox Theological Review*

GRBS *Greek, Roman and Byzantine Studies*

HBN *Hamburger Beiträge zur Numismatik*

HSCPh *Harvard Studies in Classical Philology*

HUkSt *Harvard Ukrainian Studies*

HZ *Historische Zeitschrift*

IEJ *Israel Exploration Journal*

IRAIK *Izvestiia Russkogo arkeologicheskogo instituta v Konstantinopole*

IstMitt *Istanbuler Mitteilungen, Deutsches Archäologisches Institut, Abteilung Istanbul*

JA *Journal asiatique*

JbAC *Jahrbuch für Antike und Christentum*

JbZMusMainz *Jahrbuch des Römisch-Germanischen Zentralmuseums, Mainz*

JDAI *Jahrbuch des Deutschen Archäologischen Instituts*

JGS *Journal of Glass Studies*

JHS *Journal of Hellenic Studies*

JMedHist *Journal of Medieval History*

JÖB *Jahrbuch der österreichischen Byzantinistik*

JÖBG *Jahrbuch der Österreichischen Byzantinischen Gesellschaft, 17 vols. (Vienna, 1951–68)*

JRA *Journal of Roman Archaeology*

JRAS *Journal of the Royal Asiatic Society*

JRS *Journal of Roman Studies*

JSav *Journal des savants*

JWarb *Journal of the Warburg and Courtauld Institutes*

Κρ.Χρον. Κρητικά Χρονικά

Λακ.Σπ. Λακωνικά Σπουδαί

LSJ H. G. Liddell, R. Scott, H. S. Jones et al., *A Greek-English Lexicon* (Oxford, 1968)

MadrMitt *Mitteilungen des Deutschen Archäologischen Instituts, Madrider Abteilung*

Mansi J. D. Mansi, *Sacrorum conciliorum nova et amplissima collectio, 53 vols. in 58 pts. (Paris–Leipzig, 1901–27)*

MDAI *Mitteilungen des Deutschen Archäologischen Instituts*

- MDAIK *Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo*
 MEFR *Mélanges de l'Ecole française de Rome: Antiquité*
 MélRome *Mélanges d'archéologie et d'histoire, Ecole française de Rome*
 MGH *Monumenta Germaniae historica*
 AA *Auctores antiquissimi*
 Ep *Epistolae*
 ScriptRerGerm *Scriptores rerum Germanicarum in usum scholarum ex Monumentis*
 ScriptRerLangob *Scriptores rerum Langobardicarum et Italicarum saec. VI–IX*
 SS *Scriptores*
 MM F. Miklosich and J. Müller, *Acta et diplomata graeca medii aevi sacra et profana*, 6 vols. (Vienna, 1860–90)
 MonPiot *Monuments et mémoires, Académie des inscriptions et belles-lettres, Fondation Eugène Piot*
 MünchJb *Münchner Jahrbuch der bildenden Kunst*

 NC *The Numismatic Chronicle [and Journal of the Royal Numismatic Society]*
 NCirc *The Numismatic Circular*
 Νέος Έλλ. Νέος Έλληνομνήμων
 NR *Numismatic Review*

 OCA *Orientalia christiana analecta*
 OCP *Orientalia christiana periodica*
 ODB *The Oxford Dictionary of Byzantium*, ed. A. Kazhdan et al., 3 vols. (New York–Oxford, 1991)

 PBSR *Papers of the British School at Rome*
 PEQ *Palestine Exploration Quarterly*
 PG *Patrologiae cursus completus, Series graeca*, ed. J.-P. Migne, 161 vols. in 166 pts. (Paris, 1857–66)
 PL *Patrologiae cursus completus, Series latina*, ed. J.-P. Migne, 221 vols. in 222 pts. (Paris, 1844–80)
 PLP *Prosopographisches Lexikon der Palaiologenzeit*, ed. E. Trapp et al. (Vienna, 1976–96)
 PO *Patrologia orientalis*
 Πρακτ.Έρχ.Έτ. Πρακτικὰ τῆς ἐν Ἀθήναις Ἀρχαιολογικῆς Ἑταιρείας

 RA *Revue archéologique*
 RArtChr *Revue de l'art chrétien*
 RBK *Reallexikon zur byzantinischen Kunst*, ed. K. Wessel (Stuttgart, 1963–)
 RBN *Revue belge de numismatique*
 RBPH *Revue belge de philologie et d'histoire*
 RDAC *Report of the Department of Antiquities, Cyprus*
 REArm *Revue des études arméniennes*

- REB* *Revue des études byzantines*
REG *Revue des études grecques*
RendPontAcc *Atti della Pontificia accademia romana di archeologia, Rendiconti*
RESEE *Revue des études sud-est européennes*
RevBibl *Revue biblique*
RH *Revue historique*
 Rhalles and Potles, Σύνταγμα G. A. Rhalles and M. Potles, Σύνταγμα τῶν θείων καὶ ἱερῶν κανόνων, 6 vols. (Athens, 1852–59).
RHC *Recueils des historiens des Croisades*
 HOcc *Historiens occidentaux*, 5 vols. in 8 pts. (Paris, 1844–95)
RIASA *Rivista dell'Istituto nazionale d'archeologia e storia dell'arte*
RIN *Rivista italiana di numismatica e scienze affini*
RN *Revue numismatique*
ROC *Revue de l'Orient chrétien*
ROL *Revue de l'Orient latin*
RSBN *Rivista di studi bizantini e neoellenici*
RSBS *Rivista di studi bizantini e slavi*

SBN *Studi bizantini e neoellenici*
SemKond *Seminarium Kondakovianum*
SovArh *Sovetskaia arkheologiia*
ST *Studi e testi*
StVen *Studi veneziani*
SüdostF *Südost-Forschungen*

TAPA *Transactions [and Proceedings] of the American Philological Association*
TAPS *Transactions of the American Philosophical Society*
TM *Travaux et mémoires*
TürkArkDerg *Türk arkeoloji dergisi*

VizOch *Vizantiiskie ocherki*, 5 vols. (Moscow, 1961–91)
VizVrem *Vizantiiskii vremennik*

Zepos, Jus *Jus graecoromanum*, ed. J. and P. Zepos, 8 vols. (Athens, 1931; repr. Aalen, 1962)
ZPapEpig *Zeitschrift für Papyrologie und Epigraphik*
ZRVI *Zbornik radova Vizantološkog instituta, Srpska akademija nauka*

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prepared by Eric McGeer, Chrysavgi Koutsikou, and Platon Petridis

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